Section 1. Registration Information

Source Identification

Facility Name:	Trainer Refinery
Parent Company #1 Name:	Monroe Energy LLC
Parent Company #2 Name:	

Submission and Acceptance

Submission Type:	Re-submission
Subsequent RMP Submission Reason:	5-year update (40 CFR 68.190(b)(1))
Description:	
Receipt Date:	19-Sep-2022
Postmark Date:	19-Sep-2022
Next Due Date:	19-Sep-2027
Completeness Check Date:	19-Sep-2022
Complete RMP:	Yes
De-Registration / Closed Reason:	
De-Registration / Closed Reason Other Text:	
De-Registered / Closed Date:	
De-Registered / Closed Effective Date:	
Certification Received:	Yes

Facility Identification

EPA Facility Identifier:	1000 0013 0244
Other EPA Systems Facility ID:	19061BPLCMPOS
Facility Registry System ID:	

Dun and Bradstreet Numbers (DUNS)

Facility DUNS:	803776673
Parent Company #1 DUNS:	118819478
Parent Company #2 DUNS:	

Facility Location Address

Street 1:	4101 Post Road
Street 2:	
City:	Trainer
State:	PENNSYLVANIA
ZIP:	19061
ZIP4:	
County:	DELAWARE

Facility Latitude and Longitude

Latitude (decimal):	39.826111
Longitude (decimal):	-075.405000
Lat/Long Method:	Interpolation - Photo
Lat/Long Description:	Administrative Building
Horizontal Accuracy Measure:	25
Horizontal Reference Datum Name:	North American Datum of 1983
Source Map Scale Number:	24000

Owner or Operator

Operator Name:	Monroe Energy LLC
Operator Phone:	(281) 293-1000

Mailing Address

Operator Street 1:	4101 Post Road
Operator Street 2:	
Operator City:	Trainer
Operator State:	PENNSYLVANIA
Operator ZIP:	19061
Operator ZIP4:	
Operator Foreign State or Province:	
Operator Foreign ZIP:	
Operator Foreign Country:	

Name and title of person or position responsible for Part 68 (RMP) Implementation

RMP Name of Person:	Sharon Watkins
RMP Title of Person or Position:	VP - Refinery Operations
RMP E-mail Address:	

Emergency Contact

Emergency Contact Name:	Ron Pierce
Emergency Contact Title:	Fire Chief
Emergency Contact Phone:	Non-responsive based on revised s Non-responsive based on revised s
Emergency Contact 24-Hour Phone:	Non-responsive based on revised s Non-responsive based on revised s
Emergency Contact Ext. or PIN:	
Emergency Contact E-mail Address:	N/A

Other Points of Contact

Facility or Parent Company E-mail Address:	
Facility Public Contact Phone:	
Facility or Parent Company WWW Homepage Address:	

Local Emergency Planning Committee

LEPC:	Delaware County LEPC

Full Time Equivalent Employees

Number of Full Time Employees (FTE) on Site:	515
FTE Claimed as CBI:	

Covered By

OSHA PSM :	Yes
EPCRA 302 :	Yes
CAA Title V:	Yes

Air Operating Permit ID:	TVOP-23-00003

OSHA Ranking

OSHA Star or Merit Ranking:	

Last Safety Inspection

Last Safety Inspection (By an External Agency) Date:	27-Jul-2022
Last Safety Inspection Performed By an External Agency:	State environmental agency

Predictive Filing

Did this RMP involve predictive filing?:	

Preparer Information

Preparer Name:	Brian Cavallaro
Preparer Phone:	(610) 364-8380
Preparer Street 1:	4101 Post Road
Preparer Street 2:	
Preparer City:	Trainer
Preparer State:	PENNSYLVANIA
Preparer ZIP:	19061
Preparer ZIP4:	
Preparer Foreign State:	
Preparer Foreign Country:	
Preparer Foreign ZIP:	

Confidential Business Information (CBI)

CBI Claimed:	
Substantiation Provided:	
Unsanitized RMP Provided:	

Reportable Accidents

Reportable Accidents:	See Section 6. Accident History below to determine if there were any accidents reported for this RMP.

Process Chemicals

Process ID:	1000115376
Description:	HF Alkylation
Process Chemical ID:	1000144245
Program Level:	Program Level 3 process
Chemical Name:	Hydrogen fluoride/Hydrofluoric acid (conc 50% or greater) [Hydrofluoric acid]
CAS Number:	7664-39-3
Quantity (lbs):	260966
CBI Claimed:	
Flammable/Toxic:	Toxic

Process ID:	1000115376
Description:	HF Alkylation
Process Chemical ID:	1000144246
Program Level:	Program Level 3 process
Chemical Name:	Flammable Mixture
CAS Number:	00-11-11
Quantity (lbs):	1700000
CBI Claimed:	
Flammable/Toxic:	Flammable

Flammable Mixture Chemical Components

Flammable Mixture Chemical ID:	1000127642
Chemical Name:	Isopentane [Butane, 2-methyl-]
CAS Number:	78-78-4
Flammable/Toxic:	Flammable
Flammable Mixture Chemical ID:	1000127643
Chemical Name:	1-Pentene
CAS Number:	109-67-1
Flammable/Toxic:	Flammable
Flammable Mixture Chemical ID:	1000127644
Chemical Name:	Butane
CAS Number:	106-97-8
Flammable/Toxic:	Flammable
Flammable Mixture Chemical ID:	1000127645
Chemical Name:	Isobutane [Propane, 2-methyl]
CAS Number:	75-28-5
Flammable/Toxic:	Flammable
Flammable Mixture Chemical ID:	1000127646
Chemical Name:	2-Butene-trans [2-Butene, (E)]
CAS Number:	624-64-6
Flammable/Toxic:	Flammable
Flammable Mixture Chemical ID:	1000127647
Chemical Name:	2-Butene-cis
CAS Number:	590-18-1
Flammable/Toxic:	Flammable
Flammable Mixture Chemical ID:	1000127648
Chemical Name:	2-Butene
CAS Number:	107-01-7
Flammable/Toxic:	Flammable
Flammable Mixture Chemical ID:	1000127649
Chemical Name:	1-Butene
CAS Number:	106-98-9
Flammable/Toxic:	Flammable
Flammable Mixture Chemical ID:	1000127650
Chemical Name:	Propane

CAS Number:	74-98-6
Flammable/Toxic:	Flammable
Flammable Mixture Chemical ID:	1000127651
Chemical Name:	Propylene [1-Propene]
CAS Number:	115-07-1
Flammable/Toxic:	Flammable
Flammable Mixture Chemical ID:	1000127652
Chemical Name:	Ethane
CAS Number:	74-84-0
Flammable/Toxic:	Flammable

Process ID:	1000115377
Description:	Butane Storage & Transfer
Process Chemical ID:	1000144247
Program Level:	Program Level 3 process
Chemical Name:	Flammable Mixture
CAS Number:	00-11-11
Quantity (lbs):	24000000
CBI Claimed:	
Flammable/Toxic:	Flammable

Flammable Mixture Chemical Components

Flammable Mixture Chemical ID:	1000127653
Chemical Name:	Isopentane [Butane, 2-methyl-]
CAS Number:	78-78-4
Flammable/Toxic:	Flammable
Flammable Mixture Chemical ID:	1000127654
Chemical Name:	Pentane
CAS Number:	109-66-0
Flammable/Toxic:	Flammable
Flammable Mixture Chemical ID:	1000127655
Chemical Name:	Isobutane [Propane, 2-methyl]
CAS Number:	75-28-5
Flammable/Toxic:	Flammable
Flammable Mixture Chemical ID:	1000127656
Chemical Name:	Butane
CAS Number:	106-97-8
Flammable/Toxic:	Flammable
Flammable Mixture Chemical ID:	1000127657
Chemical Name:	Propane
CAS Number:	74-98-6
Flammable/Toxic:	Flammable

Process ID:	1000115378
Description:	Lt. Component/ C3 Storage

Process Chemical ID:	1000144248
Program Level:	Program Level 3 process
Chemical Name:	Flammable Mixture
CAS Number:	00-11-11
Quantity (lbs):	17000000
CBI Claimed:	
Flammable/Toxic:	Flammable

Flammable Mixture Chemical Components

Flammable Mixture Chemical ID:	1000127658
Chemical Name:	Isopentane [Butane, 2-methyl-]
CAS Number:	78-78-4
Flammable/Toxic:	Flammable

Flammable Mixture Chemical ID:	1000127659
Chemical Name:	Pentane
CAS Number:	109-66-0
Flammable/Toxic:	Flammable

Flammable Mixture Chemical ID:	1000127660
Chemical Name:	Isobutane [Propane, 2-methyl]
CAS Number:	75-28-5
Flammable/Toxic:	Flammable

Flammable Mixture Chemical ID:	1000127661
Chemical Name:	Butane
CAS Number:	106-97-8
Flammable/Toxic:	Flammable

Flammable Mixture Chemical ID:	1000127662
Chemical Name:	Propane
CAS Number:	74-98-6
Flammable/Toxic:	Flammable

Process ID:	1000115379
Description:	Flare System
Process Chemical ID:	1000144249
Program Level:	Program Level 3 process
Chemical Name:	Flammable Mixture
CAS Number:	00-11-11
Quantity (lbs):	160000
CBI Claimed:	
Flammable/Toxic:	Flammable

Flammable Mixture Chemical Components

Flammable Mixture Chemical ID:	1000127663
Chemical Name:	Isopentane [Butane, 2-methyl-]
CAS Number:	78-78-4
Flammable/Toxic:	Flammable

Flammable Mixture Chemical ID:	1000127664
Chemical Name:	1-Pentene

CAS Number:	109-67-1
Flammable/Toxic:	Flammable
Flammable Mixture Chemical ID:	1000127665
Chemical Name:	Butane
CAS Number:	106-97-8
Flammable/Toxic:	Flammable
Flammable Mixture Chemical ID:	1000127666
Chemical Name:	Isobutane [Propane, 2-methyl]
CAS Number:	75-28-5
Flammable/Toxic:	Flammable
Flammable Mixture Chemical ID:	1000127667
Chemical Name:	2-Butene-trans [2-Butene, (E)]
CAS Number:	624-64-6
Flammable/Toxic:	Flammable
Flammable Mixture Chemical ID:	1000127668
Chemical Name:	2-Butene-cis
CAS Number:	590-18-1
Flammable/Toxic:	Flammable
Flammable Mixture Chemical ID:	1000127669
Chemical Name:	2-Butene
CAS Number:	107-01-7
Flammable/Toxic:	Flammable
Flammable Mixture Chemical ID:	1000127670
Chemical Name:	1-Butene
CAS Number:	106-98-9
Flammable/Toxic:	Flammable
Flammable Mixture Chemical ID:	1000127671
Chemical Name:	Propane
CAS Number:	74-98-6
Flammable/Toxic:	Flammable
Flammable Mixture Chemical ID:	1000127672
Chemical Name:	Propylene [1-Propene]
CAS Number:	115-07-1
Flammable/Toxic:	Flammable
Flammable Mixture Chemical ID:	1000127673
Chemical Name:	Ethane
CAS Number:	74-84-0
Flammable/Toxic:	Flammable
Flammable Mixture Chemical ID:	1000127674
Chemical Name:	Methane
CAS Number:	74-82-8
Flammable/Toxic:	Flammable
Flammable Mixture Chemical ID:	1000127675
Chemical Name:	Hydrogen
CAS Number:	1333-74-0
Flammable/Toxic:	Flammable

Process ID:	1000115380
Description:	Crude/Vacuum
Process Chemical ID:	1000144250
Program Level:	Program Level 3 process
Chemical Name:	Flammable Mixture
CAS Number:	00-11-11
Quantity (lbs):	150000
CBI Claimed:	
Flammable/Toxic:	Flammable

Flammable Mixture Chemical Components

Flammable Mixture Chemical ID:	1000127676
Chemical Name:	Propane
CAS Number:	74-98-6
Flammable/Toxic:	Flammable

Flammable Mixture Chemical ID:	1000127677
Chemical Name:	Ethane
CAS Number:	74-84-0
Flammable/Toxic:	Flammable

Flammable Mixture Chemical ID:	1000127678
Chemical Name:	Methane
CAS Number:	74-82-8
Flammable/Toxic:	Flammable

Flammable Mixture Chemical ID:	1000127679
Chemical Name:	Isopentane [Butane, 2-methyl-]
CAS Number:	78-78-4
Flammable/Toxic:	Flammable

Flammable Mixture Chemical ID:	1000127680
Chemical Name:	Hydrogen
CAS Number:	1333-74-0
Flammable/Toxic:	Flammable

Flammable Mixture Chemical ID:	1000127681
Chemical Name:	Pentane
CAS Number:	109-66-0
Flammable/Toxic:	Flammable

Flammable Mixture Chemical ID:	1000127682
Chemical Name:	Butane
CAS Number:	106-97-8
Flammable/Toxic:	Flammable

Flammable Mixture Chemical ID:	1000127683
Chemical Name:	Isobutane [Propane, 2-methyl]
CAS Number:	75-28-5
Flammable/Toxic:	Flammable

Process ID:	1000115381
Description:	Naphtha HDS
Process Chemical ID:	1000144251
Program Level:	Program Level 3 process
Chemical Name:	Flammable Mixture
CAS Number:	00-11-11
Quantity (lbs):	42000
CBI Claimed:	
Flammable/Toxic:	Flammable

Flammable Mixture Chemical Components

Flammable Mixture Chemical ID:	1000127684
Chemical Name:	Pentane
CAS Number:	109-66-0
Flammable/Toxic:	Flammable

Flammable Mixture Chemical ID:	1000127685
Chemical Name:	Isopentane [Butane, 2-methyl-]
CAS Number:	78-78-4
Flammable/Toxic:	Flammable

Flammable Mixture Chemical ID:	1000127686
Chemical Name:	Butane
CAS Number:	106-97-8
Flammable/Toxic:	Flammable

Flammable Mixture Chemical ID:	1000127687
Chemical Name:	Isobutane [Propane, 2-methyl]
CAS Number:	75-28-5
Flammable/Toxic:	Flammable

Flammable Mixture Chemical ID:	1000127688
Chemical Name:	Propane
CAS Number:	74-98-6
Flammable/Toxic:	Flammable

Flammable Mixture Chemical ID:	1000127689
Chemical Name:	Ethane
CAS Number:	74-84-0
Flammable/Toxic:	Flammable

Flammable Mixture Chemical ID:	1000127690
Chemical Name:	Methane
CAS Number:	74-82-8
Flammable/Toxic:	Flammable

Flammable Mixture Chemical ID:	1000127691
Chemical Name:	Hydrogen
CAS Number:	1333-74-0
Flammable/Toxic:	Flammable

Process ID:	1000115382

Description:	Platformer
Process Chemical ID:	1000144252
Program Level:	Program Level 3 process
Chemical Name:	Flammable Mixture
CAS Number:	00-11-11
Quantity (lbs):	220000
CBI Claimed:	
Flammable/Toxic:	Flammable

Flammable Mixture Chemical Components

Flammable Mixture Chemical ID:	1000127692
Chemical Name:	1-Butene
CAS Number:	106-98-9
Flammable/Toxic:	Flammable
Flammable Mixture Chemical ID:	1000127693
Chemical Name:	Pentane
CAS Number:	109-66-0
Flammable/Toxic:	Flammable
Flammable Mixture Chemical ID:	1000127694
Chemical Name:	Isopentane [Butane, 2-methyl-]
CAS Number:	78-78-4
Flammable/Toxic:	Flammable
Flammable Mixture Chemical ID:	1000127695
Chemical Name:	Butane
CAS Number:	106-97-8
Flammable/Toxic:	Flammable
Flammable Mixture Chemical ID:	1000127696
Chemical Name:	Isobutane [Propane, 2-methyl]
CAS Number:	75-28-5
Flammable/Toxic:	Flammable
Flammable Mixture Chemical ID:	1000127697
Chemical Name:	Propane
CAS Number:	74-98-6
Flammable/Toxic:	Flammable
Flammable Mixture Chemical ID:	1000127698
Chemical Name:	Ethane
CAS Number:	74-84-0
Flammable/Toxic:	Flammable
Flammable Mixture Chemical ID:	1000127699
Chemical Name:	Methane
CAS Number:	74-82-8
Flammable/Toxic:	Flammable
Flammable Mixture Chemical ID:	1000127700
Chemical Name:	Hydrogen
CAS Number:	1333-74-0
Flammable/Toxic:	Flammable

Process ID:	1000115383
Description:	Isocracker
Process Chemical ID:	1000144253
Program Level:	Program Level 3 process
Chemical Name:	Flammable Mixture
CAS Number:	00-11-11
Quantity (lbs):	370000
CBI Claimed:	
Flammable/Toxic:	Flammable

Flammable Mixture Chemical Components

Flammable Mixture Chemical ID:	1000127701
Chemical Name:	Pentane
CAS Number:	109-66-0
Flammable/Toxic:	Flammable

Flammable Mixture Chemical ID:	1000127702
Chemical Name:	Isopentane [Butane, 2-methyl-]
CAS Number:	78-78-4
Flammable/Toxic:	Flammable

Flammable Mixture Chemical ID:	1000127703
Chemical Name:	Butane
CAS Number:	106-97-8
Flammable/Toxic:	Flammable

Flammable Mixture Chemical ID:	1000127704
Chemical Name:	Isobutane [Propane, 2-methyl]
CAS Number:	75-28-5
Flammable/Toxic:	Flammable

Flammable Mixture Chemical ID:	1000127705
Chemical Name:	Propane
CAS Number:	74-98-6
Flammable/Toxic:	Flammable

Flammable Mixture Chemical ID:	1000127706
Chemical Name:	Ethane
CAS Number:	74-84-0
Flammable/Toxic:	Flammable

Flammable Mixture Chemical ID:	1000127707
Chemical Name:	Methane
CAS Number:	74-82-8
Flammable/Toxic:	Flammable

Flammable Mixture Chemical ID:	1000127708
Chemical Name:	Hydrogen
CAS Number:	1333-74-0
Flammable/Toxic:	Flammable

Process ID:	1000115384
Description:	FCC
Process Chemical ID:	1000144254
Program Level:	Program Level 3 process
Chemical Name:	Flammable Mixture
CAS Number:	00-11-11
Quantity (lbs):	560000
CBI Claimed:	
Flammable/Toxic:	Flammable

Flammable Mixture Chemical Components

Flammable Mixture Chemical ID:	1000127709
Chemical Name:	Pentane
CAS Number:	109-66-0
Flammable/Toxic:	Flammable
Flammable Mixture Chemical ID:	1000127710
Chemical Name:	Isopentane [Butane, 2-methyl-]
CAS Number:	78-78-4
Flammable/Toxic:	Flammable
Flammable Mixture Chemical ID:	1000127711
Chemical Name:	2-Butene-trans [2-Butene, (E)]
CAS Number:	624-64-6
Flammable/Toxic:	Flammable
Flammable Mixture Chemical ID:	1000127712
Chemical Name:	2-Butene-cis
CAS Number:	590-18-1
Flammable/Toxic:	Flammable
Flammable Mixture Chemical ID:	1000127713
Chemical Name:	2-Butene
CAS Number:	107-01-7
Flammable/Toxic:	Flammable
Flammable Mixture Chemical ID:	1000127714
Chemical Name:	1-Butene
CAS Number:	106-98-9
Flammable/Toxic:	Flammable
Flammable Mixture Chemical ID:	1000127715
Chemical Name:	Butane
CAS Number:	106-97-8
Flammable/Toxic:	Flammable
Flammable Mixture Chemical ID:	1000127716
Chemical Name:	Isobutane [Propane, 2-methyl]
CAS Number:	75-28-5
Flammable/Toxic:	Flammable
Flammable Mixture Chemical ID:	1000127717
Chemical Name:	Propylene [1-Propene]
CAS Number:	115-07-1
Flammable/Toxic:	Flammable

Flammable Mixture Chemical ID:	1000127718
Chemical Name:	Propane
CAS Number:	74-98-6
Flammable/Toxic:	Flammable

Process ID:	1000115385
Description:	ULSG
Process Chemical ID:	1000144255
Program Level:	Program Level 3 process
Chemical Name:	Flammable Mixture
CAS Number:	00-11-11
Quantity (lbs):	72000
CBI Claimed:	
Flammable/Toxic:	Flammable

Flammable Mixture Chemical Components

Flammable Mixture Chemical ID:	1000127634
Chemical Name:	1-Pentene
CAS Number:	109-67-1
Flammable/Toxic:	Flammable

Flammable Mixture Chemical ID:	1000127635
Chemical Name:	2-Pentene, (Z)-
CAS Number:	627-20-3
Flammable/Toxic:	Flammable

Flammable Mixture Chemical ID:	1000127636
Chemical Name:	Methane
CAS Number:	74-82-8
Flammable/Toxic:	Flammable

Flammable Mixture Chemical ID:	1000127637
Chemical Name:	Ethane
CAS Number:	74-84-0
Flammable/Toxic:	Flammable

Flammable Mixture Chemical ID:	1000127638
Chemical Name:	Hydrogen
CAS Number:	1333-74-0
Flammable/Toxic:	Flammable

Flammable Mixture Chemical ID:	1000127639
Chemical Name:	Propane
CAS Number:	74-98-6
Flammable/Toxic:	Flammable

Flammable Mixture Chemical ID:	1000127640
Chemical Name:	Butane
CAS Number:	106-97-8
Flammable/Toxic:	Flammable

Flammable Mixture Chemical ID:	1000127641

Chemical Name:	Isobutane [Propane, 2-methyl]
CAS Number:	75-28-5
Flammable/Toxic:	Flammable
Flammable Mixture Chemical ID:	1000127719
Chemical Name:	Isopentane [Butane, 2-methyl-]
CAS Number:	78-78-4
Flammable/Toxic:	Flammable
Flammable Mixture Chemical ID:	1000127720
Chemical Name:	1-Butene
CAS Number:	106-98-9
Flammable/Toxic:	Flammable
Flammable Mixture Chemical ID:	1000127721
Chemical Name:	2-Butene-cis
CAS Number:	590-18-1
Flammable/Toxic:	Flammable
Flammable Mixture Chemical ID:	1000127722
Chemical Name:	2-Butene-trans [2-Butene, (E)]
CAS Number:	624-64-6
Flammable/Toxic:	Flammable
Flammable Mixture Chemical ID:	1000127723
Chemical Name:	Pentane
CAS Number:	109-66-0
Flammable/Toxic:	Flammable
Flammable Mixture Chemical ID:	1000127724
Chemical Name:	2-Pentene, (E)-
CAS Number:	646-04-8
Flammable/Toxic:	Flammable
Flammable Mixture Chemical ID:	1000127725
Chemical Name:	2-Methyl-1-butene
CAS Number:	563-46-2
Flammable/Toxic:	Flammable
Flammable Mixture Chemical ID:	1000127726
Chemical Name:	3-Methyl-1-butene
CAS Number:	563-45-1
Flammable/Toxic:	Flammable

Process ID:	1000115386
Description:	DHTU #1
Process Chemical ID:	1000144256
Program Level:	Program Level 3 process
Chemical Name:	Flammable Mixture
CAS Number:	00-11-11
Quantity (lbs):	16000
CBI Claimed:	
Flammable/Toxic:	Flammable

Flammable Mixture Chemical Components

Flammable Mixture Chemical ID:	1000127727
Chemical Name:	Isopentane [Butane, 2-methyl-]
CAS Number:	78-78-4
Flammable/Toxic:	Flammable
Flammable Mixture Chemical ID:	1000127728
Chemical Name:	Pentane
CAS Number:	109-66-0
Flammable/Toxic:	Flammable
Flammable Mixture Chemical ID:	1000127729
Chemical Name:	Hydrogen
CAS Number:	1333-74-0
Flammable/Toxic:	Flammable
Flammable Mixture Chemical ID:	1000127730
Chemical Name:	Butane
CAS Number:	106-97-8
Flammable/Toxic:	Flammable
Flammable Mixture Chemical ID:	1000127731
Chemical Name:	Isobutane [Propane, 2-methyl]
CAS Number:	75-28-5
Flammable/Toxic:	Flammable
Flammable Mixture Chemical ID:	1000127732
Chemical Name:	Propane
CAS Number:	74-98-6
Flammable/Toxic:	Flammable
Flammable Mixture Chemical ID:	1000127733
Chemical Name:	Ethane
CAS Number:	74-84-0
Flammable/Toxic:	Flammable
Flammable Mixture Chemical ID:	1000127734
Chemical Name:	Methane
CAS Number:	74-82-8
Flammable/Toxic:	Flammable

Process ID:	1000115387
Description:	DHTU #2
Process Chemical ID:	1000144257
Program Level:	Program Level 3 process
Chemical Name:	Flammable Mixture
CAS Number:	00-11-11
Quantity (lbs):	21000
CBI Claimed:	
Flammable/Toxic:	Flammable

Flammable Mixture Chemical Components

Flammable Mixture Chemical ID:	1000127735
Chemical Name:	Pentane
CAS Number:	109-66-0
Flammable/Toxic:	Flammable
Flammable Mixture Chemical ID:	1000127736
Chemical Name:	Isopentane [Butane, 2-methyl-]
CAS Number:	78-78-4
Flammable/Toxic:	Flammable
Flammable Mixture Chemical ID:	1000127737
Chemical Name:	Butane
CAS Number:	106-97-8
Flammable/Toxic:	Flammable
Flammable Mixture Chemical ID:	1000127738
Chemical Name:	Isobutane [Propane, 2-methyl]
CAS Number:	75-28-5
Flammable/Toxic:	Flammable
Flammable Mixture Chemical ID:	1000127739
Chemical Name:	Propane
CAS Number:	74-98-6
Flammable/Toxic:	Flammable
Flammable Mixture Chemical ID:	1000127740
Chemical Name:	Ethane
CAS Number:	74-84-0
Flammable/Toxic:	Flammable
Flammable Mixture Chemical ID:	1000127741
Chemical Name:	Methane
CAS Number:	74-82-8
Flammable/Toxic:	Flammable
Flammable Mixture Chemical ID:	1000127742
Chemical Name:	Hydrogen
CAS Number:	1333-74-0
Flammable/Toxic:	Flammable

Process NAICS

Process ID:	1000115376
Process NAICS ID:	1000116810
Program Level:	Program Level 3 process
NAICS Code:	32411
NAICS Description:	Petroleum Refineries
Process ID:	1000115377
Process NAICS ID:	1000116811
Program Level:	Program Level 3 process
NAICS Code:	32411
NAICS Description:	Petroleum Refineries

Process ID:	1000115378
Process NAICS ID:	1000116812
Program Level:	Program Level 3 process
NAICS Code:	32411
NAICS Description:	Petroleum Refineries

Process ID:	1000115379
Process NAICS ID:	1000116813
Program Level:	Program Level 3 process
NAICS Code:	32411
NAICS Description:	Petroleum Refineries

Process ID:	1000115380
Process NAICS ID:	1000116814
Program Level:	Program Level 3 process
NAICS Code:	32411
NAICS Description:	Petroleum Refineries

Process ID:	1000115381
Process NAICS ID:	1000116815
Program Level:	Program Level 3 process
NAICS Code:	32411
NAICS Description:	Petroleum Refineries

Process ID:	1000115382
Process NAICS ID:	1000116816
Program Level:	Program Level 3 process
NAICS Code:	32411
NAICS Description:	Petroleum Refineries

Process ID:	1000115383
Process NAICS ID:	1000116817
Program Level:	Program Level 3 process
NAICS Code:	32411
NAICS Description:	Petroleum Refineries

Process ID:	1000115384
Process NAICS ID:	1000116818
Program Level:	Program Level 3 process
NAICS Code:	32411
NAICS Description:	Petroleum Refineries

Process ID:	1000115385
Process NAICS ID:	1000116819
Program Level:	Program Level 3 process
NAICS Code:	32411
NAICS Description:	Petroleum Refineries

Process ID:	1000115386
Process NAICS ID:	1000116820
Program Level:	Program Level 3 process
NAICS Code:	32411
NAICS Description:	Petroleum Refineries

Process ID:	1000115387
Process NAICS ID:	1000116821
Program Level:	Program Level 3 process
NAICS Code:	32411
NAICS Description:	Petroleum Refineries

Section 2. Toxics: Worst Case

Toxic Worst ID: 1000093305

Percent Weight:	100.0
Physical State:	Gas liquified by pressure
Model Used:	EPA's RMP*Comp(TM)
Release Duration (mins):	10
Wind Speed (m/sec):	1.5
Atmospheric Stability Class:	F
Topography:	Urban

Passive Mitigation Considered

Dikes:	
Enclosures:	
Berms:	
Drains:	
Sumps:	
Other Type:	

Section 3. Toxics: Alternative Release

Toxic Alter ID: 1000099197

Percent Weight:	100.0
Physical State:	Gas liquified by pressure
Model Used:	EPA's RMP*Comp(TM)
Wind Speed (m/sec):	3.0
Atmospheric Stability Class:	D
Topography:	Urban

Passive Mitigation Considered

Dikes:	
Enclosures:	
Berms:	
Drains:	
Sumps:	
Other Type:	

Active Mitigation Considered

Sprinkler System:	
Deluge System:	Yes
Water Curtain:	
Neutralization:	
Excess Flow Valve:	
Flares:	
Scrubbers:	
Emergency Shutdown:	
Other Type:	Fixed and mobile firewater monitors, manual shutoffs

Section 4. Flammables: Worst Case

Flammable Worst ID: 1000070346

Model Used:	EPA's RMP*Comp(TM)
Endpoint used:	1 PSI

Passive Mitigation Considered

Blast Walls:	
Other Type:	

Flammable Worst ID: 1000070347

Model Used:	EPA's RMP*Comp(TM)
Endpoint used:	1 PSI

Passive Mitigation Considered

Blast Walls:	
Other Type:	

Section 5. Flammables: Alternative Release

Flammable Alter ID: 1000065842

Model Used:	EPA's RMP*Comp(TM)

Passive Mitigation Considered

Dikes:	
Fire Walls:	
Blast Walls:	
Enclosures:	
Other Type:	

Active Mitigation Considered

Sprinkler System:	
Deluge System:	
Water Curtain:	
Excess Flow Valve:	
Other Type:	Fixed and mobile firewater monitors, manual shutoffs

Section 6. Accident History

Accident History ID: 1000077899

Date of Accident:	20-Jun-2019
Time Accident Began (HHMM):	1335
NAICS Code of Process Involved:	32411
NAICS Description:	Petroleum Refineries
Release Duration:	000 Hours 01 Minutes

Release Event

Gas Release:	Yes
Liquid Spill/Evaporation:	
Fire:	
Explosion:	
Uncontrolled/Runaway Reaction:	

Release Source

Storage Vessel:	
Piping:	
Process Vessel:	Yes
Transfer Hose:	
Valve:	
Pump:	
Joint:	
Other Release Source:	

Weather Conditions at the Time of Event

Wind Speed:	10.0
Units:	miles/h
Direction:	SW
Temperature:	87
Atmospheric Stability Class:	
Precipitation Present:	
Unknown Weather Conditions:	

On-Site Impacts

Employee or Contractor Deaths:	0
Public Responder Deaths:	0
Public Deaths:	0
Employee or Contractor Injuries:	1
Public Responder Injuries:	0
Public Injuries:	0
On-Site Property Damage ($):	0

Known Off-Site Impacts

Deaths:	0
Hospitalization:	0
Other Medical Treatments:	0
Evacuated:	0

Sheltered-in-Place:	0
Off-Site Property Damage ($):	0

Environmental Damage

Fish or Animal Kills:	
Tree, Lawn, Shrub, or Crop Damage:	
Water Contamination:	
Soil Contamination:	
Other Environmental Damage:	

Initiating Event

Initiating Event:	Equipment Failure

Contributing Factors

Equipment Failure:	
Human Error:	
Improper Procedures:	Yes
Overpressurization:	
Upset Condition:	
By-Pass Condition:	
Maintenance Activity/Inactivity:	
Process Design Failure:	
Unsuitable Equipment:	
Unusual Weather Condition:	
Management Error:	
Other Contributing Factor:	

Off-Site Responders Notified

Off-Site Responders Notified:	Notified and Responded

Changes Introduced as a Result of the Accident

Improved or Upgraded Equipment:	
Revised Maintenance:	
Revised Training:	Yes
Revised Operating Procedures:	
New Process Controls:	
New Mitigation Systems:	
Revised Emergency Response Plan:	
Changed Process:	
Reduced Inventory:	
None:	
Other Changes Introduced:	

Confidential Business Information

CBI Claimed:	

Chemicals in Accident History

Accident Chemical ID:	1000062796
Quantity Released (lbs):	1
Percent Weight:	100.0
Chemical Name:	Hydrogen fluoride/Hydrofluoric acid (conc 50% or greater) [Hydrofluoric acid]
CAS Number:	7664-39-3
Flammable/Toxic:	Toxic

Section 7. Program Level 3

Description

HF Alkylation Unit

Program Level 3 Prevention Program Chemicals

Prevention Program Chemical ID:	1000123723
Chemical Name:	Hydrogen fluoride/Hydrofluoric acid (conc 50% or greater) [Hydrofluoric acid]
Flammable/Toxic:	Toxic
CAS Number:	7664-39-3
Process ID:	1000115376
Description:	HF Alkylation
Prevention Program Level 3 ID:	1000098715
NAICS Code:	32411
Prevention Program Chemical ID:	1000123724
Chemical Name:	Flammable Mixture
Flammable/Toxic:	Flammable
CAS Number:	00-11-11
Process ID:	1000115376
Description:	HF Alkylation
Prevention Program Level 3 ID:	1000098715
NAICS Code:	32411

Safety Information

Safety Review Date (The date on which the safety information was last reviewed or revised):	20-May-2022

Process Hazard Analysis (PHA)

PHA Completion Date (Date of last PHA or PHA update):	22-Feb-2018

The Technique Used

What If:	
Checklist:	Yes
What If/Checklist:	
HAZOP:	Yes
Failure Mode and Effects Analysis:	
Fault Tree Analysis:	
Other Technique Used:	
PHA Change Completion Date (The expected or actual date of completion of all changes resulting from last PHA or PHA update):	20-Jun-2019

Major Hazards Identified

Toxic Release:	Yes
Fire:	Yes
Explosion:	Yes
Runaway Reaction:	
Polymerization:	
Overpressurization:	Yes
Corrosion:	Yes
Overfilling:	Yes
Contamination:	Yes
Equipment Failure:	Yes
Loss of Cooling, Heating, Electricity, Instrument Air:	Yes
Earthquake:	
Floods (Flood Plain):	
Tornado:	
Hurricanes:	
Other Major Hazard Identified:	

Process Controls in Use

Vents:	
Relief Valves:	Yes
Check Valves:	Yes
Scrubbers:	Yes
Flares:	Yes
Manual Shutoffs:	Yes
Automatic Shutoffs:	Yes
Interlocks:	Yes
Alarms and Procedures:	Yes
Keyed Bypass:	
Emergency Air Supply:	Yes
Emergency Power:	Yes
Backup Pump:	Yes
Grounding Equipment:	Yes
Inhibitor Addition:	
Rupture Disks:	Yes
Excess Flow Device:	
Quench System:	
Purge System:	Yes
None:	
Other Process Control in Use:	Rapid acid deinventory system, remotely operated emergency isolation valves, double seals on pumps in acid service

Mitigation Systems in Use

Sprinkler System:	
Dikes:	
Fire Walls:	
Blast Walls:	
Deluge System:	Yes
Water Curtain:	
Enclosure:	
Neutralization:	Yes

None:	
Other Mitigation System in Use:	Fixed and mobile firewater monitors, 24 hour onsite Fire Department and Emergency Response Organization

Monitoring/Detection Systems in Use

Process Area Detectors:	Yes
Perimeter Monitors:	
None:	
Other Monitoring/Detection System in Use:	24 hour monitoring of process operations utilizing a distributed control system, operator surveillance, HF acid sensitive paint used to detect leaks, video camera surveillance system, personal H2S mon

Changes Since Last PHA Update

Reduction in Chemical Inventory:	
Increase in Chemical Inventory:	
Change Process Parameters:	Yes
Installation of Process Controls:	Yes
Installation of Process Detection Systems:	
Installation of Perimeter Monitoring Systems:	
Installation of Mitigation Systems:	
None Recommended:	
None:	
Other Changes Since Last PHA or PHA Update:	

Review of Operating Procedures

Operating Procedures Revision Date (The date of the most recent review or revision of operating procedures):	21-Jun-2022

Training

Training Revision Date (The date of the most recent review or revision of training programs):	10-Jun-2021

The Type of Training Provided

Classroom:	Yes
On the Job:	Yes
Other Training:	Computer Based Training (CBT)

The Type of Competency Testing Used

Written Tests:	Yes
Oral Tests:	Yes
Demonstration:	Yes
Observation:	Yes
Other Type of Competency Testing Used:	

Maintenance

Maintenance Procedures Revision Date (The date of the most recent review or revision of maintenance procedures):	31-May-2022
Equipment Inspection Date (The date of the most recent equipment inspection or test):	09-May-2022
Equipment Tested (Equipment most recently inspected or tested):	06R002

Management of Change

Change Management Date (The date of the most recent change that triggered management of change procedures):	11-Aug-2022
Change Management Revision Date (The date of the most recent review or revision of management of change procedures):	20-Aug-2020

Pre-Startup Review

Pre-Startup Review Date (The date of the most recent pre-startup review):	27-Jul-2022

Compliance Audits

Compliance Audit Date (The date of the most recent compliance audit):	17-Sep-2020
Compliance Audit Change Completion Date (Expected or actual date of completion of all changes resulting from the compliance audit):	23-Jun-2022

Incident Investigation

Incident Investigation Date (The date of the most recent incident investigation (if any)):	20-Jun-2019
Incident Investigation Change Date (The expected or actual date of completion of all changes resulting from the investigation):	12-Dec-2019

Employee Participation Plans

Participation Plan Revision Date (The date of the most recent review or revision of employee participation plans):	13-Nov-2019

Hot Work Permit Procedures

Hot Work permit Review Date (The date of the most recent review or revision of hot work permit procedures):	22-Mar-2022

Contractor Safety Procedures

Contractor Safety Procedures Review Date (The date of the most recent review or revision of contractor safety procedures):	31-Mar-2022
Contractor Safety Performance Evaluation Date (The date of the most recent review or revision of contractor safety performance):	09-Aug-2022

Confidential Business Information

CBI Claimed:

Description

Butane Storage and Transfer

Program Level 3 Prevention Program Chemicals

Prevention Program Chemical ID:	1000123725
Chemical Name:	Flammable Mixture
Flammable/Toxic:	Flammable
CAS Number:	00-11-11

Process ID:	1000115377
Description:	Butane Storage & Transfer
Prevention Program Level 3 ID:	1000098716
NAICS Code:	32411

Safety Information

Safety Review Date (The date on which the safety information was last reviewed or revised):	15-Aug-2022

Process Hazard Analysis (PHA)

PHA Completion Date (Date of last PHA or PHA update):	27-Jan-2021

The Technique Used

What If:	
Checklist:	Yes
What If/Checklist:	
HAZOP:	Yes
Failure Mode and Effects Analysis:	
Fault Tree Analysis:	
Other Technique Used:	
PHA Change Completion Date (The expected or actual date of completion of all changes resulting from last PHA or PHA update):	

Major Hazards Identified

Toxic Release:	
Fire:	Yes
Explosion:	Yes
Runaway Reaction:	
Polymerization:	
Overpressurization:	Yes
Corrosion:	Yes
Overfilling:	Yes
Contamination:	Yes
Equipment Failure:	Yes
Loss of Cooling, Heating, Electricity, Instrument Air:	Yes
Earthquake:	

Floods (Flood Plain):	
Tornado:	
Hurricanes:	
Other Major Hazard Identified:	

Process Controls in Use

Vents:	Yes
Relief Valves:	Yes
Check Valves:	Yes
Scrubbers:	
Flares:	Yes
Manual Shutoffs:	Yes
Automatic Shutoffs:	Yes
Interlocks:	Yes
Alarms and Procedures:	Yes
Keyed Bypass:	
Emergency Air Supply:	Yes
Emergency Power:	Yes
Backup Pump:	Yes
Grounding Equipment:	Yes
Inhibitor Addition:	
Rupture Disks:	
Excess Flow Device:	Yes
Quench System:	
Purge System:	Yes
None:	
Other Process Control in Use:	Remotely operated emergency isolation valves

Mitigation Systems in Use

Sprinkler System:	
Dikes:	Yes
Fire Walls:	
Blast Walls:	
Deluge System:	Yes
Water Curtain:	
Enclosure:	
Neutralization:	
None:	
Other Mitigation System in Use:	Fixed and mobile firewater monitors, 24 hour onsite Fire Department and Emergency Response Organization

Monitoring/Detection Systems in Use

Process Area Detectors:	Yes
Perimeter Monitors:	
None:	
Other Monitoring/Detection System in Use:	24 hour monitoring of process operations utilizing a distributed control system, operator surveillance, and personal H2S monitors

Changes Since Last PHA Update

Reduction in Chemical Inventory:	
Increase in Chemical Inventory:	
Change Process Parameters:	
Installation of Process Controls:	Yes
Installation of Process Detection Systems:	
Installation of Perimeter Monitoring Systems:	
Installation of Mitigation Systems:	
None Recommended:	
None:	
Other Changes Since Last PHA or PHA Update:	

Review of Operating Procedures

Operating Procedures Revision Date (The date of the most recent review or revision of operating procedures):	10-Aug-2022

Training

Training Revision Date (The date of the most recent review or revision of training programs):	10-Jun-2021

The Type of Training Provided

Classroom:	Yes
On the Job:	Yes
Other Training:	Computer Based Training

The Type of Competency Testing Used

Written Tests:	Yes
Oral Tests:	Yes
Demonstration:	Yes
Observation:	Yes
Other Type of Competency Testing Used:	

Maintenance

Maintenance Procedures Revision Date (The date of the most recent review or revision of maintenance procedures):	31-May-2022
Equipment Inspection Date (The date of the most recent equipment inspection or test):	30-Aug-2021
Equipment Tested (Equipment most recently inspected or tested):	514/5/6/7 Sphere

Management of Change

Change Management Date (The date of the most recent change that triggered management of change procedures):	04-Aug-2022

Change Management Revision Date (The date of the most recent review or revision of management of change procedures):	20-Aug-2020

Pre-Startup Review

Pre-Startup Review Date (The date of the most recent pre-startup review):	19-Jan-2022

Compliance Audits

Compliance Audit Date (The date of the most recent compliance audit):	17-Sep-2020
Compliance Audit Change Completion Date (Expected or actual date of completion of all changes resulting from the compliance audit):	23-Jun-2022

Incident Investigation

Incident Investigation Date (The date of the most recent incident investigation (if any)):	
Incident Investigation Change Date (The expected or actual date of completion of all changes resulting from the investigation):	

Employee Participation Plans

Participation Plan Revision Date (The date of the most recent review or revision of employee participation plans):	13-Nov-2019

Hot Work Permit Procedures

Hot Work permit Review Date (The date of the most recent review or revision of hot work permit procedures):	22-Mar-2022

Contractor Safety Procedures

Contractor Safety Procedures Review Date (The date of the most recent review or revision of contractor safety procedures):	31-Mar-2022
Contractor Safety Performance Evaluation Date (The date of the most recent review or revision of contractor safety performance):	09-Aug-2022

Confidential Business Information

CBI Claimed:	

Description

Light Component/Propane Storage

Program Level 3 Prevention Program Chemicals

Prevention Program Chemical ID:	1000123726
Chemical Name:	Flammable Mixture
Flammable/Toxic:	Flammable
CAS Number:	00-11-11
Process ID:	1000115378
Description:	Lt. Component/ C3 Storage
Prevention Program Level 3 ID:	1000098717
NAICS Code:	32411

Safety Information

Safety Review Date (The date on which the safety information was last reviewed or revised):	12-Mar-2021

Process Hazard Analysis (PHA)

PHA Completion Date (Date of last PHA or PHA update):	21-Apr-2021

The Technique Used

What If:	
Checklist:	Yes
What If/Checklist:	
HAZOP:	Yes
Failure Mode and Effects Analysis:	
Fault Tree Analysis:	
Other Technique Used:	
PHA Change Completion Date (The expected or actual date of completion of all changes resulting from last PHA or PHA update):	26-Oct-2021

Major Hazards Identified

Toxic Release:	
Fire:	Yes
Explosion:	Yes
Runaway Reaction:	
Polymerization:	
Overpressurization:	Yes
Corrosion:	Yes
Overfilling:	Yes
Contamination:	Yes
Equipment Failure:	Yes
Loss of Cooling, Heating, Electricity, Instrument Air:	Yes
Earthquake:	

Floods (Flood Plain):	
Tornado:	
Hurricanes:	
Other Major Hazard Identified:	

Process Controls in Use

Vents:	
Relief Valves:	Yes
Check Valves:	Yes
Scrubbers:	
Flares:	Yes
Manual Shutoffs:	Yes
Automatic Shutoffs:	Yes
Interlocks:	Yes
Alarms and Procedures:	Yes
Keyed Bypass:	
Emergency Air Supply:	Yes
Emergency Power:	Yes
Backup Pump:	Yes
Grounding Equipment:	Yes
Inhibitor Addition:	
Rupture Disks:	
Excess Flow Device:	Yes
Quench System:	
Purge System:	Yes
None:	
Other Process Control in Use:	Remotely operated emergency isolation valves

Mitigation Systems in Use

Sprinkler System:	
Dikes:	Yes
Fire Walls:	
Blast Walls:	
Deluge System:	Yes
Water Curtain:	
Enclosure:	
Neutralization:	
None:	
Other Mitigation System in Use:	Fixed water spray system, fixed and mobile firewater monitors, and 24 hour onsite Fire Department and Emergency Response Organization

Monitoring/Detection Systems in Use

Process Area Detectors:	Yes
Perimeter Monitors:	
None:	
Other Monitoring/Detection System in Use:	24 hour monitoring of process operations utilizing a distributed control system, operator surveillance, and personal H2S monitors

Changes Since Last PHA Update

Reduction in Chemical Inventory:	
Increase in Chemical Inventory:	
Change Process Parameters:	
Installation of Process Controls:	Yes
Installation of Process Detection Systems:	
Installation of Perimeter Monitoring Systems:	
Installation of Mitigation Systems:	
None Recommended:	
None:	
Other Changes Since Last PHA or PHA Update:	

Review of Operating Procedures

Operating Procedures Revision Date (The date of the most recent review or revision of operating procedures):	08-Jan-2022

Training

Training Revision Date (The date of the most recent review or revision of training programs):	10-Jun-2021

The Type of Training Provided

Classroom:	Yes
On the Job:	Yes
Other Training:	Computer Based Training

The Type of Competency Testing Used

Written Tests:	Yes
Oral Tests:	Yes
Demonstration:	Yes
Observation:	Yes
Other Type of Competency Testing Used:	

Maintenance

Maintenance Procedures Revision Date (The date of the most recent review or revision of maintenance procedures):	31-May-2022
Equipment Inspection Date (The date of the most recent equipment inspection or test):	02-Feb-2022
Equipment Tested (Equipment most recently inspected or tested):	83D100

Management of Change

Change Management Date (The date of the most recent change that triggered management of change procedures):	13-Jul-2022

Change Management Revision Date (The date of the most recent review or revision of management of change procedures):	20-Aug-2020

Pre-Startup Review

Pre-Startup Review Date (The date of the most recent pre-startup review):	03-Mar-2021

Compliance Audits

Compliance Audit Date (The date of the most recent compliance audit):	17-Sep-2020
Compliance Audit Change Completion Date (Expected or actual date of completion of all changes resulting from the compliance audit):	23-Jun-2021

Incident Investigation

Incident Investigation Date (The date of the most recent incident investigation (if any)):	
Incident Investigation Change Date (The expected or actual date of completion of all changes resulting from the investigation):	

Employee Participation Plans

Participation Plan Revision Date (The date of the most recent review or revision of employee participation plans):	30-Nov-2019

Hot Work Permit Procedures

Hot Work permit Review Date (The date of the most recent review or revision of hot work permit procedures):	22-Mar-2022

Contractor Safety Procedures

Contractor Safety Procedures Review Date (The date of the most recent review or revision of contractor safety procedures):	31-Mar-2022
Contractor Safety Performance Evaluation Date (The date of the most recent review or revision of contractor safety performance):	09-Aug-2022

Confidential Business Information

CBI Claimed:	

Description

Flare System

Program Level 3 Prevention Program Chemicals

Prevention Program Chemical ID:	1000123727
Chemical Name:	Flammable Mixture
Flammable/Toxic:	Flammable
CAS Number:	00-11-11
Process ID:	1000115379
Description:	Flare System
Prevention Program Level 3 ID:	1000098718
NAICS Code:	32411

Safety Information

Safety Review Date (The date on which the safety information was last reviewed or revised):	10-Aug-2022

Process Hazard Analysis (PHA)

PHA Completion Date (Date of last PHA or PHA update):	03-Aug-2018

The Technique Used

What If:	
Checklist:	Yes
What If/Checklist:	
HAZOP:	Yes
Failure Mode and Effects Analysis:	
Fault Tree Analysis:	
Other Technique Used:	
PHA Change Completion Date (The expected or actual date of completion of all changes resulting from last PHA or PHA update):	

Major Hazards Identified

Toxic Release:	Yes
Fire:	Yes
Explosion:	Yes
Runaway Reaction:	
Polymerization:	
Overpressurization:	Yes
Corrosion:	Yes
Overfilling:	Yes
Contamination:	Yes
Equipment Failure:	Yes
Loss of Cooling, Heating, Electricity, Instrument Air:	Yes
Earthquake:	

Floods (Flood Plain):	
Tornado:	
Hurricanes:	
Other Major Hazard Identified:	

Process Controls in Use

Vents:	Yes
Relief Valves:	Yes
Check Valves:	Yes
Scrubbers:	
Flares:	Yes
Manual Shutoffs:	Yes
Automatic Shutoffs:	
Interlocks:	
Alarms and Procedures:	Yes
Keyed Bypass:	
Emergency Air Supply:	Yes
Emergency Power:	Yes
Backup Pump:	Yes
Grounding Equipment:	Yes
Inhibitor Addition:	
Rupture Disks:	
Excess Flow Device:	
Quench System:	Yes
Purge System:	Yes
None:	
Other Process Control in Use:	

Mitigation Systems in Use

Sprinkler System:	
Dikes:	
Fire Walls:	
Blast Walls:	
Deluge System:	
Water Curtain:	
Enclosure:	
Neutralization:	
None:	
Other Mitigation System in Use:	Fixed and mobile firewater monitors, 24 hour onsite Fire Department and Emergency Response Organization

Monitoring/Detection Systems in Use

Process Area Detectors:	
Perimeter Monitors:	
None:	
Other Monitoring/Detection System in Use:	24 hour monitoring of process operations utilizing a distributed control system, operator surveillance, video camera surveillance for Flare tip, and personal H2S monitors

Changes Since Last PHA Update

Reduction in Chemical Inventory:	
Increase in Chemical Inventory:	
Change Process Parameters:	
Installation of Process Controls:	
Installation of Process Detection Systems:	
Installation of Perimeter Monitoring Systems:	
Installation of Mitigation Systems:	
None Recommended:	Yes
None:	
Other Changes Since Last PHA or PHA Update:	

Review of Operating Procedures

Operating Procedures Revision Date (The date of the most recent review or revision of operating procedures):	30-Jun-2022

Training

Training Revision Date (The date of the most recent review or revision of training programs):	10-Jun-2021

The Type of Training Provided

Classroom:	Yes
On the Job:	Yes
Other Training:	Computer Based Training

The Type of Competency Testing Used

Written Tests:	Yes
Oral Tests:	Yes
Demonstration:	Yes
Observation:	Yes
Other Type of Competency Testing Used:	

Maintenance

Maintenance Procedures Revision Date (The date of the most recent review or revision of maintenance procedures):	31-May-2022
Equipment Inspection Date (The date of the most recent equipment inspection or test):	14-Jul-2022
Equipment Tested (Equipment most recently inspected or tested):	62E001

Management of Change

Change Management Date (The date of the most recent change that triggered management of change procedures):	01-Apr-2021

Change Management Revision Date (The date of the most recent review or revision of management of change procedures):	20-Aug-2020

Pre-Startup Review

Pre-Startup Review Date (The date of the most recent pre-startup review):	01-Apr-2021

Compliance Audits

Compliance Audit Date (The date of the most recent compliance audit):	17-Sep-2020
Compliance Audit Change Completion Date (Expected or actual date of completion of all changes resulting from the compliance audit):	23-Jun-2022

Incident Investigation

Incident Investigation Date (The date of the most recent incident investigation (if any)):	
Incident Investigation Change Date (The expected or actual date of completion of all changes resulting from the investigation):	

Employee Participation Plans

Participation Plan Revision Date (The date of the most recent review or revision of employee participation plans):	13-Nov-2019

Hot Work Permit Procedures

Hot Work permit Review Date (The date of the most recent review or revision of hot work permit procedures):	22-Mar-2022

Contractor Safety Procedures

Contractor Safety Procedures Review Date (The date of the most recent review or revision of contractor safety procedures):	31-Mar-2022
Contractor Safety Performance Evaluation Date (The date of the most recent review or revision of contractor safety performance):	09-Aug-2022

Confidential Business Information

CBI Claimed:	

Description

Crude/Vacuum Units (Note: Previous submissions had this process as all Area 3 units; the DHT has been broken out of this process for this submission).

Program Level 3 Prevention Program Chemicals

Prevention Program Chemical ID:	1000123728
Chemical Name:	Flammable Mixture
Flammable/Toxic:	Flammable
CAS Number:	00-11-11

Process ID:	1000115380
Description:	Crude/Vacuum
Prevention Program Level 3 ID:	1000098719
NAICS Code:	32411

Safety Information

Safety Review Date (The date on which the safety information was last reviewed or revised):	26-Jul-2022

Process Hazard Analysis (PHA)

PHA Completion Date (Date of last PHA or PHA update):	24-Sep-2020

The Technique Used

What If:	
Checklist:	Yes
What If/Checklist:	
HAZOP:	Yes
Failure Mode and Effects Analysis:	
Fault Tree Analysis:	
Other Technique Used:	
PHA Change Completion Date (The expected or actual date of completion of all changes resulting from last PHA or PHA update):	31-Dec-2024

Major Hazards Identified

Toxic Release:	Yes
Fire:	Yes
Explosion:	Yes
Runaway Reaction:	
Polymerization:	
Overpressurization:	Yes
Corrosion:	Yes
Overfilling:	Yes
Contamination:	Yes
Equipment Failure:	Yes
Loss of Cooling, Heating, Electricity, Instrument Air:	Yes

Earthquake:	
Floods (Flood Plain):	
Tornado:	
Hurricanes:	
Other Major Hazard Identified:	

Process Controls in Use

Vents:	
Relief Valves:	Yes
Check Valves:	Yes
Scrubbers:	
Flares:	Yes
Manual Shutoffs:	Yes
Automatic Shutoffs:	Yes
Interlocks:	Yes
Alarms and Procedures:	Yes
Keyed Bypass:	
Emergency Air Supply:	Yes
Emergency Power:	Yes
Backup Pump:	Yes
Grounding Equipment:	Yes
Inhibitor Addition:	
Rupture Disks:	
Excess Flow Device:	
Quench System:	
Purge System:	Yes
None:	
Other Process Control in Use:	Remotely operated emergency isolation valve

Mitigation Systems in Use

Sprinkler System:	
Dikes:	
Fire Walls:	
Blast Walls:	
Deluge System:	Yes
Water Curtain:	
Enclosure:	
Neutralization:	
None:	
Other Mitigation System in Use:	Fixed and mobile firewater monitors, 24 hour onsite Fire Department and Emergency Response Organization

Monitoring/Detection Systems in Use

Process Area Detectors:	
Perimeter Monitors:	
None:	
Other Monitoring/Detection System in Use:	24 hour monitoring of process operations utilizing a distributed control system, operator surveillance, and personal H2S monitors

Changes Since Last PHA Update

Reduction in Chemical Inventory:	
Increase in Chemical Inventory:	
Change Process Parameters:	
Installation of Process Controls:	Yes
Installation of Process Detection Systems:	
Installation of Perimeter Monitoring Systems:	
Installation of Mitigation Systems:	
None Recommended:	
None:	
Other Changes Since Last PHA or PHA Update:	

Review of Operating Procedures

Operating Procedures Revision Date (The date of the most recent review or revision of operating procedures):	19-Jul-2022

Training

Training Revision Date (The date of the most recent review or revision of training programs):	10-Jun-2021

The Type of Training Provided

Classroom:	Yes
On the Job:	Yes
Other Training:	Computer Based Training

The Type of Competency Testing Used

Written Tests:	Yes
Oral Tests:	Yes
Demonstration:	Yes
Observation:	Yes
Other Type of Competency Testing Used:	

Maintenance

Maintenance Procedures Revision Date (The date of the most recent review or revision of maintenance procedures):	31-May-2022
Equipment Inspection Date (The date of the most recent equipment inspection or test):	22-Jun-2022
Equipment Tested (Equipment most recently inspected or tested):	01D012

Management of Change

Change Management Date (The date of the most recent change that triggered management of change procedures):	09-Aug-2022

Change Management Revision Date (The date of the most recent review or revision of management of change procedures):	20-Aug-2020

Pre-Startup Review

Pre-Startup Review Date (The date of the most recent pre-startup review):	10-Aug-2022

Compliance Audits

Compliance Audit Date (The date of the most recent compliance audit):	17-Sep-2020
Compliance Audit Change Completion Date (Expected or actual date of completion of all changes resulting from the compliance audit):	23-Jun-2022

Incident Investigation

Incident Investigation Date (The date of the most recent incident investigation (if any)):	
Incident Investigation Change Date (The expected or actual date of completion of all changes resulting from the investigation):	

Employee Participation Plans

Participation Plan Revision Date (The date of the most recent review or revision of employee participation plans):	13-Nov-2019

Hot Work Permit Procedures

Hot Work permit Review Date (The date of the most recent review or revision of hot work permit procedures):	22-Mar-2022

Contractor Safety Procedures

Contractor Safety Procedures Review Date (The date of the most recent review or revision of contractor safety procedures):	31-Mar-2022
Contractor Safety Performance Evaluation Date (The date of the most recent review or revision of contractor safety performance):	09-Aug-2022

Confidential Business Information

CBI Claimed:	

Description

Naphtha HDS

Program Level 3 Prevention Program Chemicals

Prevention Program Chemical ID:	1000123729
Chemical Name:	Flammable Mixture
Flammable/Toxic:	Flammable
CAS Number:	00-11-11

Process ID:	1000115381
Description:	Naphtha HDS
Prevention Program Level 3 ID:	1000098720
NAICS Code:	32411

Safety Information

Safety Review Date (The date on which the safety information was last reviewed or revised):	01-Mar-2022

Process Hazard Analysis (PHA)

PHA Completion Date (Date of last PHA or PHA update):	20-Aug-2019

The Technique Used

What If:	
Checklist:	Yes
What If/Checklist:	
HAZOP:	Yes
Failure Mode and Effects Analysis:	
Fault Tree Analysis:	
Other Technique Used:	
PHA Change Completion Date (The expected or actual date of completion of all changes resulting from last PHA or PHA update):	31-Dec-2023

Major Hazards Identified

Toxic Release:	Yes
Fire:	Yes
Explosion:	Yes
Runaway Reaction:	
Polymerization:	
Overpressurization:	Yes
Corrosion:	Yes
Overfilling:	Yes
Contamination:	Yes
Equipment Failure:	Yes
Loss of Cooling, Heating, Electricity, Instrument Air:	Yes
Earthquake:	

Floods (Flood Plain):	
Tornado:	
Hurricanes:	
Other Major Hazard Identified:	

Process Controls in Use

Vents:	
Relief Valves:	Yes
Check Valves:	Yes
Scrubbers:	
Flares:	Yes
Manual Shutoffs:	Yes
Automatic Shutoffs:	Yes
Interlocks:	Yes
Alarms and Procedures:	Yes
Keyed Bypass:	
Emergency Air Supply:	Yes
Emergency Power:	Yes
Backup Pump:	Yes
Grounding Equipment:	Yes
Inhibitor Addition:	
Rupture Disks:	
Excess Flow Device:	
Quench System:	
Purge System:	Yes
None:	
Other Process Control in Use:	Remotely operated emergency isolation valves

Mitigation Systems in Use

Sprinkler System:	
Dikes:	
Fire Walls:	
Blast Walls:	
Deluge System:	
Water Curtain:	
Enclosure:	
Neutralization:	
None:	
Other Mitigation System in Use:	Fixed and mobile firewater monitors, 24 hour onsite Fire Department and Emergency Response Organization

Monitoring/Detection Systems in Use

Process Area Detectors:	
Perimeter Monitors:	
None:	
Other Monitoring/Detection System in Use:	24 hour monitoring of process operations utilizing a distributed control system, operator surveillance, and personal H2S monitors

Changes Since Last PHA Update

Reduction in Chemical Inventory:	
Increase in Chemical Inventory:	
Change Process Parameters:	
Installation of Process Controls:	Yes
Installation of Process Detection Systems:	
Installation of Perimeter Monitoring Systems:	
Installation of Mitigation Systems:	
None Recommended:	
None:	
Other Changes Since Last PHA or PHA Update:	Installed emergency isolation valves for pumps

Review of Operating Procedures

Operating Procedures Revision Date (The date of the most recent review or revision of operating procedures):	09-Aug-2022

Training

Training Revision Date (The date of the most recent review or revision of training programs):	10-Jun-2021

The Type of Training Provided

Classroom:	Yes
On the Job:	Yes
Other Training:	Computer Based Training

The Type of Competency Testing Used

Written Tests:	Yes
Oral Tests:	Yes
Demonstration:	Yes
Observation:	Yes
Other Type of Competency Testing Used:	

Maintenance

Maintenance Procedures Revision Date (The date of the most recent review or revision of maintenance procedures):	31-May-2022
Equipment Inspection Date (The date of the most recent equipment inspection or test):	08-Jun-2022
Equipment Tested (Equipment most recently inspected or tested):	11D001

Management of Change

Change Management Date (The date of the most recent change that triggered management of change procedures):	21-Jul-2022

Change Management Revision Date (The date of the most recent review or revision of management of change procedures):	20-Aug-2020

Pre-Startup Review

Pre-Startup Review Date (The date of the most recent pre-startup review):	14-Jul-2022

Compliance Audits

Compliance Audit Date (The date of the most recent compliance audit):	17-Sep-2020
Compliance Audit Change Completion Date (Expected or actual date of completion of all changes resulting from the compliance audit):	23-Jun-2022

Incident Investigation

Incident Investigation Date (The date of the most recent incident investigation (if any)):	
Incident Investigation Change Date (The expected or actual date of completion of all changes resulting from the investigation):	

Employee Participation Plans

Participation Plan Revision Date (The date of the most recent review or revision of employee participation plans):	13-Nov-2019

Hot Work Permit Procedures

Hot Work permit Review Date (The date of the most recent review or revision of hot work permit procedures):	22-Mar-2022

Contractor Safety Procedures

Contractor Safety Procedures Review Date (The date of the most recent review or revision of contractor safety procedures):	31-Mar-2022
Contractor Safety Performance Evaluation Date (The date of the most recent review or revision of contractor safety performance):	09-Aug-2022

Confidential Business Information

CBI Claimed:	

Description

Platformer

Program Level 3 Prevention Program Chemicals

Prevention Program Chemical ID:	1000123730
Chemical Name:	Flammable Mixture
Flammable/Toxic:	Flammable
CAS Number:	00-11-11

Process ID:	1000115382
Description:	Platformer
Prevention Program Level 3 ID:	1000098721
NAICS Code:	32411

Safety Information

Safety Review Date (The date on which the safety information was last reviewed or revised):	01-Mar-2022

Process Hazard Analysis (PHA)

PHA Completion Date (Date of last PHA or PHA update):	04-Apr-2019

The Technique Used

What If:	
Checklist:	Yes
What If/Checklist:	Yes
HAZOP:	Yes
Failure Mode and Effects Analysis:	
Fault Tree Analysis:	
Other Technique Used:	
PHA Change Completion Date (The expected or actual date of completion of all changes resulting from last PHA or PHA update):	31-Dec-2023

Major Hazards Identified

Toxic Release:	Yes
Fire:	Yes
Explosion:	Yes
Runaway Reaction:	
Polymerization:	
Overpressurization:	Yes
Corrosion:	Yes
Overfilling:	Yes
Contamination:	Yes
Equipment Failure:	Yes
Loss of Cooling, Heating, Electricity, Instrument Air:	Yes
Earthquake:	

Floods (Flood Plain):	
Tornado:	
Hurricanes:	
Other Major Hazard Identified:	

Process Controls in Use

Vents:	Yes
Relief Valves:	Yes
Check Valves:	Yes
Scrubbers:	
Flares:	Yes
Manual Shutoffs:	Yes
Automatic Shutoffs:	Yes
Interlocks:	Yes
Alarms and Procedures:	Yes
Keyed Bypass:	
Emergency Air Supply:	Yes
Emergency Power:	Yes
Backup Pump:	Yes
Grounding Equipment:	Yes
Inhibitor Addition:	
Rupture Disks:	
Excess Flow Device:	
Quench System:	
Purge System:	Yes
None:	
Other Process Control in Use:	Remotely operated emergency isolation valves

Mitigation Systems in Use

Sprinkler System:	
Dikes:	
Fire Walls:	
Blast Walls:	
Deluge System:	
Water Curtain:	Yes
Enclosure:	
Neutralization:	
None:	
Other Mitigation System in Use:	Fixed and mobile firewater monitors, 24 hour onsite Fire Department and Emergency Response Organization

Monitoring/Detection Systems in Use

Process Area Detectors:	
Perimeter Monitors:	
None:	
Other Monitoring/Detection System in Use:	24 hour monitoring of process operations utiizing a distributed control system, operator surveillance, and personal H2S monitors

Changes Since Last PHA Update

Reduction in Chemical Inventory:	
Increase in Chemical Inventory:	
Change Process Parameters:	
Installation of Process Controls:	
Installation of Process Detection Systems:	
Installation of Perimeter Monitoring Systems:	
Installation of Mitigation Systems:	
None Recommended:	
None:	Yes
Other Changes Since Last PHA or PHA Update:	

Review of Operating Procedures

Operating Procedures Revision Date (The date of the most recent review or revision of operating procedures):	08-Aug-2022

Training

Training Revision Date (The date of the most recent review or revision of training programs):	10-Jun-2021

The Type of Training Provided

Classroom:	Yes
On the Job:	Yes
Other Training:	Computer Based Training

The Type of Competency Testing Used

Written Tests:	Yes
Oral Tests:	Yes
Demonstration:	Yes
Observation:	Yes
Other Type of Competency Testing Used:	

Maintenance

Maintenance Procedures Revision Date (The date of the most recent review or revision of maintenance procedures):	31-May-2022
Equipment Inspection Date (The date of the most recent equipment inspection or test):	09-Aug-2022
Equipment Tested (Equipment most recently inspected or tested):	13D032A

Management of Change

Change Management Date (The date of the most recent change that triggered management of change procedures):	07-Jul-2022

Change Management Revision Date (The date of the most recent review or revision of management of change procedures):	20-Aug-2020

Pre-Startup Review

Pre-Startup Review Date (The date of the most recent pre-startup review):	14-Jul-2022

Compliance Audits

Compliance Audit Date (The date of the most recent compliance audit):	17-Sep-2020
Compliance Audit Change Completion Date (Expected or actual date of completion of all changes resulting from the compliance audit):	23-Jun-2022

Incident Investigation

Incident Investigation Date (The date of the most recent incident investigation (if any)):	
Incident Investigation Change Date (The expected or actual date of completion of all changes resulting from the investigation):	

Employee Participation Plans

Participation Plan Revision Date (The date of the most recent review or revision of employee participation plans):	13-Nov-2019

Hot Work Permit Procedures

Hot Work permit Review Date (The date of the most recent review or revision of hot work permit procedures):	22-Mar-2022

Contractor Safety Procedures

Contractor Safety Procedures Review Date (The date of the most recent review or revision of contractor safety procedures):	31-Mar-2022
Contractor Safety Performance Evaluation Date (The date of the most recent review or revision of contractor safety performance):	09-Aug-2022

Confidential Business Information

CBI Claimed:	

Description

Isocracker

Program Level 3 Prevention Program Chemicals

Prevention Program Chemical ID:	1000123731
Chemical Name:	Flammable Mixture
Flammable/Toxic:	Flammable
CAS Number:	00-11-11

Process ID:	1000115383
Description:	Isocracker
Prevention Program Level 3 ID:	1000098722
NAICS Code:	32411

Safety Information

Safety Review Date (The date on which the safety information was last reviewed or revised):	03-Aug-2022

Process Hazard Analysis (PHA)

PHA Completion Date (Date of last PHA or PHA update):	18-Dec-2018

The Technique Used

What If:	
Checklist:	Yes
What If/Checklist:	
HAZOP:	Yes
Failure Mode and Effects Analysis:	
Fault Tree Analysis:	
Other Technique Used:	
PHA Change Completion Date (The expected or actual date of completion of all changes resulting from last PHA or PHA update):	31-Dec-2023

Major Hazards Identified

Toxic Release:	Yes
Fire:	Yes
Explosion:	Yes
Runaway Reaction:	Yes
Polymerization:	
Overpressurization:	Yes
Corrosion:	Yes
Overfilling:	Yes
Contamination:	Yes
Equipment Failure:	Yes
Loss of Cooling, Heating, Electricity, Instrument Air:	Yes
Earthquake:	

Floods (Flood Plain):	
Tornado:	
Hurricanes:	
Other Major Hazard Identified:	

Process Controls in Use

Vents:	
Relief Valves:	Yes
Check Valves:	Yes
Scrubbers:	
Flares:	Yes
Manual Shutoffs:	Yes
Automatic Shutoffs:	Yes
Interlocks:	Yes
Alarms and Procedures:	Yes
Keyed Bypass:	
Emergency Air Supply:	Yes
Emergency Power:	Yes
Backup Pump:	Yes
Grounding Equipment:	Yes
Inhibitor Addition:	
Rupture Disks:	
Excess Flow Device:	
Quench System:	Yes
Purge System:	Yes
None:	
Other Process Control in Use:	Remotely operated emergency isolation valves

Mitigation Systems in Use

Sprinkler System:	
Dikes:	
Fire Walls:	
Blast Walls:	
Deluge System:	
Water Curtain:	
Enclosure:	
Neutralization:	
None:	
Other Mitigation System in Use:	Fixed and mobile firewater monitors, 24 hour onsite Fire Department and Emergency Response Organization

Monitoring/Detection Systems in Use

Process Area Detectors:	
Perimeter Monitors:	
None:	
Other Monitoring/Detection System in Use:	24 hour monitoring of process operations utilizing a distributed control system, operator surveillance, and personal H2S monitors

Changes Since Last PHA Update

Reduction in Chemical Inventory:	
Increase in Chemical Inventory:	
Change Process Parameters:	
Installation of Process Controls:	Yes
Installation of Process Detection Systems:	
Installation of Perimeter Monitoring Systems:	
Installation of Mitigation Systems:	
None Recommended:	
None:	
Other Changes Since Last PHA or PHA Update:	Car sealed open block valve for relief protection

Review of Operating Procedures

Operating Procedures Revision Date (The date of the most recent review or revision of operating procedures):	17-Jun-2022

Training

Training Revision Date (The date of the most recent review or revision of training programs):	10-Jun-2021

The Type of Training Provided

Classroom:	Yes
On the Job:	Yes
Other Training:	Computer Based Training

The Type of Competency Testing Used

Written Tests:	Yes
Oral Tests:	Yes
Demonstration:	Yes
Observation:	Yes
Other Type of Competency Testing Used:	

Maintenance

Maintenance Procedures Revision Date (The date of the most recent review or revision of maintenance procedures):	31-May-2022
Equipment Inspection Date (The date of the most recent equipment inspection or test):	23-Jun-2022
Equipment Tested (Equipment most recently inspected or tested):	21E011A

Management of Change

Change Management Date (The date of the most recent change that triggered management of change procedures):	16-Jun-2022

Change Management Revision Date (The date of the most recent review or revision of management of change procedures):	20-Aug-2020

Pre-Startup Review

Pre-Startup Review Date (The date of the most recent pre-startup review):	29-Jul-2022

Compliance Audits

Compliance Audit Date (The date of the most recent compliance audit):	17-Sep-2020
Compliance Audit Change Completion Date (Expected or actual date of completion of all changes resulting from the compliance audit):	23-Jun-2022

Incident Investigation

Incident Investigation Date (The date of the most recent incident investigation (if any)):	
Incident Investigation Change Date (The expected or actual date of completion of all changes resulting from the investigation):	

Employee Participation Plans

Participation Plan Revision Date (The date of the most recent review or revision of employee participation plans):	13-Nov-2019

Hot Work Permit Procedures

Hot Work permit Review Date (The date of the most recent review or revision of hot work permit procedures):	22-Mar-2022

Contractor Safety Procedures

Contractor Safety Procedures Review Date (The date of the most recent review or revision of contractor safety procedures):	31-Mar-2022
Contractor Safety Performance Evaluation Date (The date of the most recent review or revision of contractor safety performance):	09-Aug-2022

Confidential Business Information

CBI Claimed:	

Description

FCC Unit

Program Level 3 Prevention Program Chemicals

Prevention Program Chemical ID:	1000123732
Chemical Name:	Flammable Mixture
Flammable/Toxic:	Flammable
CAS Number:	00-11-11
Process ID:	1000115384
Description:	FCC
Prevention Program Level 3 ID:	1000098723
NAICS Code:	32411

Safety Information

Safety Review Date (The date on which the safety information was last reviewed or revised):	13-Jun-2022

Process Hazard Analysis (PHA)

PHA Completion Date (Date of last PHA or PHA update):	14-Feb-2019

The Technique Used

What If:	
Checklist:	Yes
What If/Checklist:	
HAZOP:	Yes
Failure Mode and Effects Analysis:	
Fault Tree Analysis:	
Other Technique Used:	
PHA Change Completion Date (The expected or actual date of completion of all changes resulting from last PHA or PHA update):	10-Jan-2020

Major Hazards Identified

Toxic Release:	Yes
Fire:	Yes
Explosion:	Yes
Runaway Reaction:	
Polymerization:	
Overpressurization:	Yes
Corrosion:	Yes
Overfilling:	Yes
Contamination:	Yes
Equipment Failure:	Yes
Loss of Cooling, Heating, Electricity, Instrument Air:	Yes
Earthquake:	

Floods (Flood Plain):	
Tornado:	
Hurricanes:	
Other Major Hazard Identified:	

Process Controls in Use

Vents:	Yes
Relief Valves:	Yes
Check Valves:	Yes
Scrubbers:	Yes
Flares:	Yes
Manual Shutoffs:	Yes
Automatic Shutoffs:	Yes
Interlocks:	Yes
Alarms and Procedures:	Yes
Keyed Bypass:	
Emergency Air Supply:	Yes
Emergency Power:	Yes
Backup Pump:	Yes
Grounding Equipment:	Yes
Inhibitor Addition:	Yes
Rupture Disks:	Yes
Excess Flow Device:	
Quench System:	
Purge System:	Yes
None:	
Other Process Control in Use:	Emergency shutdown system, remotely operated emergency isolation valve.

Mitigation Systems in Use

Sprinkler System:	
Dikes:	
Fire Walls:	
Blast Walls:	
Deluge System:	Yes
Water Curtain:	
Enclosure:	
Neutralization:	
None:	
Other Mitigation System in Use:	Fixed and mobile firewater monitors, 24 hour onsite Fire Department and Emergency Response Organization

Monitoring/Detection Systems in Use

Process Area Detectors:	Yes
Perimeter Monitors:	
None:	
Other Monitoring/Detection System in Use:	24 hour monitoring of process operations utilizing a distributed control system, operator surveillance, and personal H2S monitors

Changes Since Last PHA Update

Reduction in Chemical Inventory:	
Increase in Chemical Inventory:	
Change Process Parameters:	
Installation of Process Controls:	Yes
Installation of Process Detection Systems:	
Installation of Perimeter Monitoring Systems:	
Installation of Mitigation Systems:	
None Recommended:	
None:	
Other Changes Since Last PHA or PHA Update:	1) Car sealed open block valves; 2) Implemented critical operating procedure

Review of Operating Procedures

Operating Procedures Revision Date (The date of the most recent review or revision of operating procedures):	19-Apr-2022

Training

Training Revision Date (The date of the most recent review or revision of training programs):	10-Jun-2021

The Type of Training Provided

Classroom:	Yes
On the Job:	Yes
Other Training:	Computer Based Training

The Type of Competency Testing Used

Written Tests:	Yes
Oral Tests:	Yes
Demonstration:	Yes
Observation:	Yes
Other Type of Competency Testing Used:	

Maintenance

Maintenance Procedures Revision Date (The date of the most recent review or revision of maintenance procedures):	31-May-2022
Equipment Inspection Date (The date of the most recent equipment inspection or test):	02-Jun-2022
Equipment Tested (Equipment most recently inspected or tested):	07D0118

Management of Change

Change Management Date (The date of the most recent change that triggered management of change procedures):	11-Aug-2022

Change Management Revision Date (The date of the most recent review or revision of management of change procedures):	20-Aug-2020

Pre-Startup Review

Pre-Startup Review Date (The date of the most recent pre-startup review):	26-Jul-2022

Compliance Audits

Compliance Audit Date (The date of the most recent compliance audit):	17-Sep-2020
Compliance Audit Change Completion Date (Expected or actual date of completion of all changes resulting from the compliance audit):	23-Jun-2022

Incident Investigation

Incident Investigation Date (The date of the most recent incident investigation (if any)):	
Incident Investigation Change Date (The expected or actual date of completion of all changes resulting from the investigation):	

Employee Participation Plans

Participation Plan Revision Date (The date of the most recent review or revision of employee participation plans):	13-Nov-2019

Hot Work Permit Procedures

Hot Work permit Review Date (The date of the most recent review or revision of hot work permit procedures):	22-Mar-2022

Contractor Safety Procedures

Contractor Safety Procedures Review Date (The date of the most recent review or revision of contractor safety procedures):	31-Mar-2022
Contractor Safety Performance Evaluation Date (The date of the most recent review or revision of contractor safety performance):	09-Aug-2022

Confidential Business Information

CBI Claimed:	

Description

ULSG - Ultra Low Sulfur Gasoline Unit - September 2017 resubmission is being done due to the addition of the ULSG unit.

Program Level 3 Prevention Program Chemicals

Prevention Program Chemical ID:	1000123733
Chemical Name:	Flammable Mixture
Flammable/Toxic:	Flammable
CAS Number:	00-11-11
Process ID:	1000115385
Description:	ULSG
Prevention Program Level 3 ID:	1000098724
NAICS Code:	32411

Safety Information

Safety Review Date (The date on which the safety information was last reviewed or revised):	28-Jul-2022

Process Hazard Analysis (PHA)

PHA Completion Date (Date of last PHA or PHA update):	28-Oct-2021

The Technique Used

What If:	
Checklist:	Yes
What If/Checklist:	
HAZOP:	Yes
Failure Mode and Effects Analysis:	
Fault Tree Analysis:	
Other Technique Used:	
PHA Change Completion Date (The expected or actual date of completion of all changes resulting from last PHA or PHA update):	

Major Hazards Identified

Toxic Release:	
Fire:	Yes
Explosion:	Yes
Runaway Reaction:	
Polymerization:	
Overpressurization:	Yes
Corrosion:	Yes
Overfilling:	Yes
Contamination:	Yes
Equipment Failure:	Yes
Loss of Cooling, Heating, Electricity, Instrument Air:	Yes
Earthquake:	

Floods (Flood Plain):	
Tornado:	
Hurricanes:	
Other Major Hazard Identified:	

Process Controls in Use

Vents:	
Relief Valves:	Yes
Check Valves:	Yes
Scrubbers:	
Flares:	Yes
Manual Shutoffs:	Yes
Automatic Shutoffs:	Yes
Interlocks:	Yes
Alarms and Procedures:	Yes
Keyed Bypass:	Yes
Emergency Air Supply:	Yes
Emergency Power:	Yes
Backup Pump:	Yes
Grounding Equipment:	Yes
Inhibitor Addition:	
Rupture Disks:	Yes
Excess Flow Device:	
Quench System:	
Purge System:	Yes
None:	
Other Process Control in Use:	Remotely operated emergency isolation valves

Mitigation Systems in Use

Sprinkler System:	
Dikes:	
Fire Walls:	
Blast Walls:	
Deluge System:	
Water Curtain:	
Enclosure:	
Neutralization:	
None:	
Other Mitigation System in Use:	Fixed and mobile firewater monitors, 24 hour onsite Fire Department and Emergency Response organization

Monitoring/Detection Systems in Use

Process Area Detectors:	
Perimeter Monitors:	
None:	
Other Monitoring/Detection System in Use:	24 hour monitoring of process operations utilizing a distributed control system, operator surveillance, and personal H2S monitors

Changes Since Last PHA Update

Reduction in Chemical Inventory:	
Increase in Chemical Inventory:	
Change Process Parameters:	
Installation of Process Controls:	Yes
Installation of Process Detection Systems:	
Installation of Perimeter Monitoring Systems:	
Installation of Mitigation Systems:	
None Recommended:	
None:	
Other Changes Since Last PHA or PHA Update:	

Review of Operating Procedures

Operating Procedures Revision Date (The date of the most recent review or revision of operating procedures):	29-Jun-2022

Training

Training Revision Date (The date of the most recent review or revision of training programs):	10-Jun-2021

The Type of Training Provided

Classroom:	Yes
On the Job:	Yes
Other Training:	Computer Based Training

The Type of Competency Testing Used

Written Tests:	Yes
Oral Tests:	Yes
Demonstration:	Yes
Observation:	Yes
Other Type of Competency Testing Used:	

Maintenance

Maintenance Procedures Revision Date (The date of the most recent review or revision of maintenance procedures):	31-May-2022
Equipment Inspection Date (The date of the most recent equipment inspection or test):	05-Nov-2021
Equipment Tested (Equipment most recently inspected or tested):	15D010

Management of Change

Change Management Date (The date of the most recent change that triggered management of change procedures):	24-May-2022

Change Management Revision Date (The date of the most recent review or revision of management of change procedures):	20-Aug-2020

Pre-Startup Review

Pre-Startup Review Date (The date of the most recent pre-startup review):	22-Apr-2022

Compliance Audits

Compliance Audit Date (The date of the most recent compliance audit):	17-Sep-2020
Compliance Audit Change Completion Date (Expected or actual date of completion of all changes resulting from the compliance audit):	23-Jun-2022

Incident Investigation

Incident Investigation Date (The date of the most recent incident investigation (if any)):	
Incident Investigation Change Date (The expected or actual date of completion of all changes resulting from the investigation):	

Employee Participation Plans

Participation Plan Revision Date (The date of the most recent review or revision of employee participation plans):	13-Nov-2019

Hot Work Permit Procedures

Hot Work permit Review Date (The date of the most recent review or revision of hot work permit procedures):	22-Mar-2022

Contractor Safety Procedures

Contractor Safety Procedures Review Date (The date of the most recent review or revision of contractor safety procedures):	31-Mar-2022
Contractor Safety Performance Evaluation Date (The date of the most recent review or revision of contractor safety performance):	09-Aug-2022

Confidential Business Information

CBI Claimed:	

Description

DHTU #1 - Note: was previously reported under Area 3 Units in past RMP submittals

Program Level 3 Prevention Program Chemicals

Prevention Program Chemical ID:	1000123734
Chemical Name:	Flammable Mixture
Flammable/Toxic:	Flammable
CAS Number:	00-11-11
Process ID:	1000115386
Description:	DHTU #1
Prevention Program Level 3 ID:	1000098725
NAICS Code:	32411

Safety Information

Safety Review Date (The date on which the safety information was last reviewed or revised):	04-Apr-2022

Process Hazard Analysis (PHA)

PHA Completion Date (Date of last PHA or PHA update):	26-Apr-2019

The Technique Used

What If:	
Checklist:	Yes
What If/Checklist:	
HAZOP:	Yes
Failure Mode and Effects Analysis:	
Fault Tree Analysis:	
Other Technique Used:	
PHA Change Completion Date (The expected or actual date of completion of all changes resulting from last PHA or PHA update):	29-Mar-2021

Major Hazards Identified

Toxic Release:	Yes
Fire:	Yes
Explosion:	Yes
Runaway Reaction:	
Polymerization:	
Overpressurization:	Yes
Corrosion:	Yes
Overfilling:	Yes
Contamination:	Yes
Equipment Failure:	Yes
Loss of Cooling, Heating, Electricity, Instrument Air:	Yes
Earthquake:	

Floods (Flood Plain):	
Tornado:	
Hurricanes:	
Other Major Hazard Identified:	

Process Controls in Use

Vents:	
Relief Valves:	Yes
Check Valves:	Yes
Scrubbers:	
Flares:	Yes
Manual Shutoffs:	Yes
Automatic Shutoffs:	Yes
Interlocks:	Yes
Alarms and Procedures:	Yes
Keyed Bypass:	
Emergency Air Supply:	Yes
Emergency Power:	Yes
Backup Pump:	Yes
Grounding Equipment:	Yes
Inhibitor Addition:	
Rupture Disks:	
Excess Flow Device:	
Quench System:	
Purge System:	Yes
None:	
Other Process Control in Use:	Remotely operated emergency isolation valve

Mitigation Systems in Use

Sprinkler System:	
Dikes:	
Fire Walls:	
Blast Walls:	
Deluge System:	Yes
Water Curtain:	
Enclosure:	
Neutralization:	
None:	
Other Mitigation System in Use:	Fixed and mobile firewater monitors, 24 hour

Monitoring/Detection Systems in Use

Process Area Detectors:	
Perimeter Monitors:	
None:	
Other Monitoring/Detection System in Use:	24 hour monitoring of process operations utilizing

Changes Since Last PHA Update

Reduction in Chemical Inventory:	
Increase in Chemical Inventory:	
Change Process Parameters:	
Installation of Process Controls:	Yes

Installation of Process Detection Systems:	
Installation of Perimeter Monitoring Systems:	
Installation of Mitigation Systems:	
None Recommended:	
None:	
Other Changes Since Last PHA or PHA Update:	

Review of Operating Procedures

Operating Procedures Revision Date (The date of the most recent review or revision of operating procedures):	14-Mar-2022

Training

Training Revision Date (The date of the most recent review or revision of training programs):	10-Jun-2021

The Type of Training Provided

Classroom:	Yes
On the Job:	Yes
Other Training:	Computer based training

The Type of Competency Testing Used

Written Tests:	Yes
Oral Tests:	Yes
Demonstration:	Yes
Observation:	Yes
Other Type of Competency Testing Used:	

Maintenance

Maintenance Procedures Revision Date (The date of the most recent review or revision of maintenance procedures):	31-May-2022
Equipment Inspection Date (The date of the most recent equipment inspection or test):	14-Jul-2022
Equipment Tested (Equipment most recently inspected or tested):	04D514

Management of Change

Change Management Date (The date of the most recent change that triggered management of change procedures):	05-Jul-2022
Change Management Revision Date (The date of the most recent review or revision of management of change procedures):	20-Aug-2020

Pre-Startup Review

Pre-Startup Review Date (The date of the most recent pre-startup review):	01-Mar-2022

Compliance Audits

Compliance Audit Date (The date of the most recent compliance audit):	17-Sep-2020
Compliance Audit Change Completion Date (Expected or actual date of completion of all changes resulting from the compliance audit):	23-Jun-2022

Incident Investigation

Incident Investigation Date (The date of the most recent incident investigation (if any)):	
Incident Investigation Change Date (The expected or actual date of completion of all changes resulting from the investigation):	

Employee Participation Plans

Participation Plan Revision Date (The date of the most recent review or revision of employee participation plans):	13-Nov-2019

Hot Work Permit Procedures

Hot Work permit Review Date (The date of the most recent review or revision of hot work permit procedures):	22-Mar-2022

Contractor Safety Procedures

Contractor Safety Procedures Review Date (The date of the most recent review or revision of contractor safety procedures):	31-Mar-2022
Contractor Safety Performance Evaluation Date (The date of the most recent review or revision of contractor safety performance):	09-Aug-2022

Confidential Business Information

CBI Claimed:	

Description

D2 Unit - Previous RMP submittals included this process unit as part of the Isocracker unit. For this submittal, it is being broken out separately.

Program Level 3 Prevention Program Chemicals

Prevention Program Chemical ID:	1000123735
Chemical Name:	Flammable Mixture
Flammable/Toxic:	Flammable
CAS Number:	00-11-11

Process ID:	1000115387
Description:	DHTU #2
Prevention Program Level 3 ID:	1000098726
NAICS Code:	32411

Safety Information

Safety Review Date (The date on which the safety information was last reviewed or revised):	11-Aug-2022

Process Hazard Analysis (PHA)

PHA Completion Date (Date of last PHA or PHA update):	17-Apr-2018

The Technique Used

What If:	
Checklist:	Yes
What If/Checklist:	
HAZOP:	Yes
Failure Mode and Effects Analysis:	
Fault Tree Analysis:	
Other Technique Used:	
PHA Change Completion Date (The expected or actual date of completion of all changes resulting from last PHA or PHA update):	31-Dec-2022

Major Hazards Identified

Toxic Release:	
Fire:	Yes
Explosion:	Yes
Runaway Reaction:	
Polymerization:	
Overpressurization:	Yes
Corrosion:	Yes
Overfilling:	Yes
Contamination:	Yes
Equipment Failure:	Yes
Loss of Cooling, Heating, Electricity, Instrument Air:	Yes

Earthquake:	
Floods (Flood Plain):	
Tornado:	
Hurricanes:	
Other Major Hazard Identified:	

Process Controls in Use

Vents:	
Relief Valves:	Yes
Check Valves:	Yes
Scrubbers:	
Flares:	Yes
Manual Shutoffs:	Yes
Automatic Shutoffs:	Yes
Interlocks:	Yes
Alarms and Procedures:	Yes
Keyed Bypass:	Yes
Emergency Air Supply:	Yes
Emergency Power:	Yes
Backup Pump:	Yes
Grounding Equipment:	Yes
Inhibitor Addition:	
Rupture Disks:	
Excess Flow Device:	Yes
Quench System:	
Purge System:	Yes
None:	
Other Process Control in Use:	Remotely operated emergency isolation valve

Mitigation Systems in Use

Sprinkler System:	
Dikes:	Yes
Fire Walls:	
Blast Walls:	
Deluge System:	Yes
Water Curtain:	
Enclosure:	
Neutralization:	
None:	
Other Mitigation System in Use:	Fixed and mobile firewater monitors, 24 hour onsite Fire Department and Emergency Response Organization

Monitoring/Detection Systems in Use

Process Area Detectors:	Yes
Perimeter Monitors:	
None:	
Other Monitoring/Detection System in Use:	"24 hour monitoring of process operations utilizing a distributed control system, operator surveillance, and personal H2S monitors

Changes Since Last PHA Update

Reduction in Chemical Inventory:	
Increase in Chemical Inventory:	
Change Process Parameters:	
Installation of Process Controls:	Yes
Installation of Process Detection Systems:	
Installation of Perimeter Monitoring Systems:	
Installation of Mitigation Systems:	
None Recommended:	
None:	
Other Changes Since Last PHA or PHA Update:	

Review of Operating Procedures

Operating Procedures Revision Date (The date of the most recent review or revision of operating procedures):	01-May-2022

Training

Training Revision Date (The date of the most recent review or revision of training programs):	10-Jun-2021

The Type of Training Provided

Classroom:	Yes
On the Job:	Yes
Other Training:	Computer based training

The Type of Competency Testing Used

Written Tests:	Yes
Oral Tests:	Yes
Demonstration:	Yes
Observation:	Yes
Other Type of Competency Testing Used:	

Maintenance

Maintenance Procedures Revision Date (The date of the most recent review or revision of maintenance procedures):	31-May-2022
Equipment Inspection Date (The date of the most recent equipment inspection or test):	11-Apr-2022
Equipment Tested (Equipment most recently inspected or tested):	32R001

Management of Change

Change Management Date (The date of the most recent change that triggered management of change procedures):	08-Aug-2022

Change Management Revision Date (The date of the most recent review or revision of management of change procedures):	20-Aug-2020

Pre-Startup Review

Pre-Startup Review Date (The date of the most recent pre-startup review):	10-Aug-2022

Compliance Audits

Compliance Audit Date (The date of the most recent compliance audit):	17-Sep-2020
Compliance Audit Change Completion Date (Expected or actual date of completion of all changes resulting from the compliance audit):	23-Jun-2022

Incident Investigation

Incident Investigation Date (The date of the most recent incident investigation (if any)):	
Incident Investigation Change Date (The expected or actual date of completion of all changes resulting from the investigation):	

Employee Participation Plans

Participation Plan Revision Date (The date of the most recent review or revision of employee participation plans):	13-Nov-2019

Hot Work Permit Procedures

Hot Work permit Review Date (The date of the most recent review or revision of hot work permit procedures):	22-Mar-2022

Contractor Safety Procedures

Contractor Safety Procedures Review Date (The date of the most recent review or revision of contractor safety procedures):	31-Mar-2022
Contractor Safety Performance Evaluation Date (The date of the most recent review or revision of contractor safety performance):	09-Aug-2022

Confidential Business Information

CBI Claimed:	

Section 8. Program Level 2

No records found.

Section 9. Emergency Response

Written Emergency Response (ER) Plan

Community Plan (Is facility included in written community emergency response plan?):	Yes
Facility Plan (Does facility have its own written emergency response plan?):	Yes
Response Actions (Does ER plan include specific actions to be taken in response to accidental releases of regulated substance(s)?):	Yes
Public Information (Does ER plan include procedures for informing the public and local agencies responding to accidental release?):	Yes
Healthcare (Does facility's ER plan include information on emergency health care?):	Yes

Emergency Response Review

Review Date (Date of most recent review or update of facility's ER plan):	25-Jan-2022

Emergency Response Training

Training Date (Date of most recent review or update of facility's employees):	27-Jul-2022

Local Agency

Agency Name (Name of local agency with which the facility ER plan or response activities are coordinated):	Marcus Hook - Trainer Fire Depts.
Agency Phone Number (Phone number of local agency with which the facility ER plan or response activities are coordinated):	(610) 485-4393

Subject to

OSHA Regulations at 29 CFR 1910.38:	Yes
OSHA Regulations at 29 CFR 1910.120:	Yes
Clean Water Regulations at 40 CFR 112:	Yes
RCRA Regulations at CFR 264, 265, and 279.52:	Yes
OPA 90 Regulations at 40 CFR 112, 33 CFR 154, 49 CFR 194, or 30 CFR 254:	Yes
State EPCRA Rules or Laws:	Yes
Other (Specify):	MTSA at 33 CFR Parts 101 and 105

Executive Summary

ACCIDENTAL RELEASE PREVENTION AND RESPONSE POLICIES

The Trainer Refinery has a standing commitment to worker and public safety. This commitment is demonstrated by the resources and efforts expended in accident prevention, including a comprehensive Process Safety program. Management systems are in place at the Trainer Refinery to ensure safety is incorporated into the design, installation, operation, inspection, and maintenance of our processes. Our accident prevention program includes maintaining updated operating procedures and practices as well as extensive personnel training on safety. We also have highly trained and well-qualified emergency responders onsite 24 hours a day ready to respond to control and mitigate an incident should one occur.

DESCRIPTION OF THE STATIONARY SOURCE AND REGULATED SUBSTANCES

The Trainer Refinery located in Trainer, PA processes raw crude oil into refined products including gasoline, jet fuel, diesel fuel, heating oil, heavy fuel oil, liquefied petroleum gas (LPG), and sulfur. The LPG products consist of butane and propane which are both regulated flammable substances. The refinery produces and/or uses other regulated flammables such as hydrogen, methane, ethane, and pentane. In addition, the refinery uses and/or processes hydrofluoric acid, ammonia, and hydrogen sulfide which are regulated toxic substances. Hydrofluoric acid is the only regulated toxic substance that exceeds threshold reporting quantities and is subject to RMP reporting.

GENERAL ACCIDENTAL RELEASE PREVENTION PROGRAM STEPS

The following is a summary of the general accident prevention program in place at the Trainer Refinery. This summary addresses each of the elements and describes the management system in place to implement the accident prevention program.

Employee Participation

The Trainer Refinery encourages employees to participate in all facets of process safety and accident prevention. Examples of employee participation range from updating and compiling technical documents and chemical information to participating as a member of a process hazard analysis (PHA) team as well as incident/near miss investigations. Information on the refinery's accident prevention program is available to all employees and they are encouraged to suggest improvements to any of the various program elements. Specific ways that employees can be involved in the accident prevention program are documented in an employee participation plan that is maintained at the refinery and addresses each accident prevention program element. In addition, the refinery has a number of initiatives to address process safety and occupational safety.

These activities include the Refinery Health, Safety, Environment and Reliability (HSER) Team and the Joint (Management & Labor) Health & Safety Committee. The committee typically consists of members from a broad cross-section of the refinery, including operations, mechanical, technical and plant management. Other means by which employees participate in safety and are solicited for input and feedback on various Process Safety programs are through daily safety toolbox meetings, weekly safety discussions, department communications such as Safety Alerts and Lessons Learned, operator participation in PHAs, pre-startup safety reviews, training classes, operator involvement in training, operating procedure review/development, maintenance involvement in task procedure development review and updates.

Process Safety Information

The Trainer Refinery maintains a variety of technical documents that are used to help maintain safe operation of the processes. These documents address chemical properties and associated hazards, Safe Operating Limits (SOLs) of critical process parameters, specific chemical inventories, and equipment design basis/configuration information. A Refinery Guideline summarizing the reference documents and their location, and updating procedure is readily available as part of the Process Safety Information section of the written Process Safety Compliance Plan to help employees locate any necessary process safety information.

Chemical-specific information, including exposure hazards, chemical reactivity/stability hazards, and emergency response/exposure treatment considerations, are provided in safety data sheets (SDSs). For specific process units and operations, the refinery has documented safety-related limits for specific critical operating and key process parameters (e.g., temperature, pressure, level, and composition) as part of procedures for normal operations. The refinery ensures that the process is maintained within these limits using highly trained personnel, monitoring instruments and process controls, and protective safety instrumented systems (e.g., automated shutdown systems).

The refinery also maintains numerous technical documents including process flow diagrams and piping and instrumentation diagrams that provide information about the design and construction of process equipment. These technical documents include information about materials of construction, design pressure and temperature ratings, electrical rating of equipment, etc. This

information, in combination with written procedures and trained personnel, provides a basis for establishing inspection and maintenance activities, as well as for evaluating proposed process and facility changes to ensure that safety features in the process are not compromised.

Process Hazard Analysis

The Trainer Refinery has a comprehensive program to identify and control hazards associated with the various processes. Each process is systematically examined to identify hazards and ensure that adequate controls are in place to manage these hazards.

The Trainer Refinery primarily uses the hazard and operability (HAZOP) analysis methodology to perform these evaluations. HAZOP analysis is recognized as one of the most systematic and thorough hazard evaluation techniques. The analyses are conducted using a team of highly qualified people who have operating, engineering, and safety expertise. This team identifies and evaluates hazards of the process as well as accident prevention and mitigation measures, and makes suggestions for additional prevention and/or mitigation measures whenever the team finds such measures are necessary.

Layer of Protection Analysis, commonly referred to as LOPA, augment Process Hazards Analyses conducted for each covered process. LOPA is a risk assessment technique that was developed to semi- quantitatively evaluate the safety integrity of process operations. LOPA uses a simple numerical calculation to measure the adequacy of protection layers (alarms with operator response, relief valves, control loops, etc.) against the potential risk of process deviations (loss of containment, personnel exposure, etc.). The LOPA results give order of magnitude approximation of the risk of a scenario.

The PHA team findings and recommendations are presented to the Refinery Health, Safety, Environment and Reliability Team. Implementation of mitigation options in response to PHA findings is based on a relative risk ranking assigned by the PHA team. This ranking helps ensure that potential accident scenarios assigned the highest risk receive priority attention. All action items in response to PHA team findings are tracked until they are complete or resolved. The final resolution of each finding is documented and retained.

To help ensure that the process controls and/or process hazards do not eventually deviate significantly from the original design safety features, Trainer Refinery periodically updates and revalidates the hazard analysis results. These periodic reviews are conducted at least every 5 years. The results and findings from these updates are documented and retained.

Operating Procedures

The Trainer Refinery maintains written procedures that address various modes of process operations, such as (1) normal operations, (2) temporary operations, (3) normal shutdown, (4) emergency shutdown, (5) unit startup and (6) initial startup of a new process. Troubleshooting guidelines which provide guidance on corrective actions to be taken when responding to upper or lower limit exceedances for critical operating and key process parameters also exist. These operating procedures can be used as a reference by experienced operators for refresher training purposes and provide a basis for consistent training of new operators.

The procedures are maintained and updated by the unit operating personnel to reflect comments from users and changes made through the management of change process. The procedures are annually certified to be current and accurate. Written operating procedures are readily available to all personnel to use as necessary to safely perform their job tasks.

Training

To complement the written procedures for process operations, the Trainer Refinery has implemented a comprehensive training program for all employees involved in operating a process. New employees receive fundamental training in refinery operations. After successfully completing this training, a new operator receives unit-specific training. This training provides the skills and knowledge required to perform the duties of a specific job in operations, and is provided to both new hires who complete fundamentals, as well as incumbent operators who are cross training on additional job qualifications. Job specific training provides detailed instruction on the process and process equipment. This phase of training includes hands-on demonstrations (or simulations) of start-up, shutdown and emergency operating procedures. It also includes the review and practice of routine, job-specific tasks performed by the operator (e.g. drawing and testing samples).

After operators demonstrate (e.g. through tests & skills demonstration) having adequate knowledge to perform the duties and tasks in a safe manner on their own, they can work independently. In addition, all operators periodically review operating procedures and safe work practices so that their skills and knowledge are maintained at an acceptable level. Performance-based refresher training is conducted monthly through the refinery performance management process. Training is documented for each operator, including

the means used to verify that the operator understood the training.

Contractors

The Trainer Refinery uses contractors to supplement its work force during periods of increased maintenance or construction activities. Because many contractors work on or near process equipment, the refinery has procedures in place so that contractors perform their work in a safe manner, are aware of the hazards in their workplace, understand what they should do in the event of an emergency, understand and follow site safety rules, and inform refinery personnel of any hazards that they find during their work. This is accomplished by providing contractors with site specific orientation, information about safety and health hazards, emergency response plan requirements, and safe work practices prior to their beginning work. In addition, the refinery evaluates contractor safety programs and performance during the selection of a contractor. Refinery personnel and/or contractor safety personnel periodically monitor contractor performance to ensure that contractors are fulfilling their safety obligations.

Pre-startup Safety Reviews (PSSRs)

The Trainer Refinery conducts a PSSR for new facilities or facility modifications to ensure that safety features, procedures, personnel, and the equipment are appropriately prepared for startup prior to placing the equipment into service. This review provides a final check to make sure construction is in accordance with the design specifications and that all supporting systems are operationally ready. Checklists are utilized to verify all aspects of startup readiness. A PSSR checklist is incorporated into the Management of Change (MOC) process and includes field verification of the construction and serves a quality assurance function by requiring verification that accident prevention program requirements are properly implemented.

Mechanical Integrity

The Trainer Refinery has well-established practices / procedures and uses original equipment manufacturers' (OEM) instructions to maintain pressure vessels, piping systems, relief and vent systems, controls, pumps and compressors, and emergency shutdown systems in a safe operating condition. The basic aspects of this program include: developing written procedures, conducting training, performing inspections and tests, correcting identified deficiencies, and applying quality assurance measures. In combination, these activities form a system that maintains the mechanical integrity of the process equipment.

Maintenance personnel receive training on an overview of the process, safety and health hazards, applicable instructions for maintenance of equipment, refinery's emergency response plan, and applicable safe work practices to help ensure that they can perform their job in a safe manner. Written instructions and practices help ensure that work is performed in a consistent manner and provide a basis for training. Inspections and tests are performed to help ensure that equipment functions as intended, and to verify that equipment is operated within acceptable limits (e.g. adequate wall thickness for pressure vessels). If a deficiency is identified, the necessary actions are taken to address the deficiency.

Another integral part of the mechanical integrity program is quality assurance. The Trainer Refinery incorporates quality assurance measures into equipment purchases and repairs. This helps ensure that new equipment is suitable for its intended use and that proper materials and spare parts are used when repairs are made.

Safe Work Practices

Trainer Refinery has long-standing safe work practices in place for worker and process safety. Examples of these include control of the entry/presence/exit of support personnel who enter process areas, a lockout/tagout/tryout procedure for control of energy sources for equipment undergoing maintenance, a procedure for safe removal of hazardous materials before process piping or equipment is opened, a safe work permit process including a procedure to control spark-producing activities (i.e., hot work permits), and a permit and procedure so that adequate precautions are in place before entry into a confined space. These procedures and others, along with training of affected personnel, form a management system that ensures operations and maintenance activities are performed safely.

Safe work practices are audited to measure compliance with refinery procedures and regulatory requirements, and serve as a vital element in managing plant safety. The Safe Work Practices Audit program consists of numerous auditing protocols focused on housekeeping and compliance with policies & procedures and is designed to ensure that the Refinery is operated and maintained in such a way that the safety and health of the employees, the community and the environment are properly protected.

Management of Change

The Trainer Refinery has a comprehensive system to manage changes to processes. This system requires that changes to items

such as process equipment, chemicals, and certain other facility changes be evaluated and authorized before being implemented. Changes are reviewed to determine that adequate controls are in place to manage and control any new hazards and verify that existing safeguards have not been compromised by the change. Affected process safety information, such as chemical hazard information, process operating limits, process and instrumentation diagrams, as well as procedures are updated to incorporate these changes. In addition, operating and maintenance personnel are provided any necessary training on the change prior to its startup. MOC records are retained for at least 5 years so that they can be reviewed during future PHAs and PHA revalidations.

Incident Investigation
The Trainer Refinery promptly investigates incidents that resulted in, or reasonably could have resulted in, a fire/explosion, toxic gas release, major property damage, environmental loss, or personal injury. The goal of each investigation is to determine the root cause and develop corrective actions and actions to prevent a recurrence of the incident or a similar incident. The investigation team documents its findings, develops recommendations, and reviews these results with the appropriate members of the Refinery Leadership Team. The investigation team's recommendations are tracked until they are resolved. The final resolution of each recommendation is documented, and the investigation lessons learned are reviewed with all employees and contractors when appropriate who could be affected by the findings. The results of the investigation are retained for at least 5 years so that they can be reviewed during future PHAs and PHA revalidations.

Compliance Audits
To help the accident prevention program to function properly, the Trainer Refinery conducts periodic audits to determine whether the procedures and practices required by the accident prevention program are being implemented. Compliance audits are conducted at least every 3 years.

The audit team develops findings that are presented to refinery management and assigned to appropriate subject matter experts for resolution. Corrective actions taken in response to the audit team's findings are tracked until they are complete.

Trade Secrets
Employees are entitled to know process safety information even though it may contain trade secrets. Necessary information will be made available to persons responsible for performing activities such as compiling PSI, conducting a PHA, developing Operator Procedures, investigating incidents, responding to emergencies and conducting compliance audits.

CHEMICAL-SPECIFIC PREVENTION STEPS
The processes at the Trainer Refinery present inherent risks that must be managed for continued safe operation. The accident prevention program summarized previously is applied to all our Program 3 EPA RMP-covered processes at the Trainer Refinery. Collectively, these prevention program activities help prevent potential accident scenarios that could be caused by (1) equipment failures and (2) human errors.

In addition to the accident prevention program activities, the Trainer Refinery has safety features on units to help (1) detect a release, (2) contain/control a release, and (3) reduce the consequences of (mitigate) a release. The following types of safety devices are used in various processes throughout the refinery to help prevent incidents:

A. Release Detection:
• Chemical specific sensitive paint used to detect leaks at joints
• Fixed Hydrocarbon and chemical specific detectors with alarms
• Personal H2S monitors
• Video camera surveillance VOC monitoring program
• Operations rounds and surveillance around the clock

B. Release Containment/Control:
• Process relief valves that discharge to a safe location
• Relief gas scrubber for chemical neutralization
• Flare Gas Recovery Unit
• Valves to permit isolation and/or depressuring of the process or a portion of the process (manual, automated, and remotely operated)
• Automated shutdown systems for specific process parameters (e.g., high level, high temperature, high pressure)

• Emergency shutdown and depressuring systems
• System to facilitate rapid removal of the hydrofluoric acid inventory in the event of a release (i.e., Rapid Acid Deinventory System)
• Dual mechanical seals on pumps
• Curbing or diking to contain liquid releases
• Redundant critical equipment and instrumentation (e.g., uninterruptible power supply for process control system, backup firewater pumps)
• Check valves for limiting flow in one direction

C. Release Mitigation:
• Fire suppression and extinguishing systems Water deluge for specific equipment
• Highly trained emergency response personnel on duty 24 hours a day
• Industrial Firefighting Group (IFG) and mutual aid emergency response organizations
• Personal protective equipment (e.g., protective clothing, self-contained breathing apparatus)

FIVE-YEAR ACCIDENT HISTORY
During the past 5 years, two incidents occurred at the Trainer Refinery involving a release of a regulated substance that meets RMP reporting requirements.

On 6/20/2019 at approximately 1:35 PM, a Monroe Energy Alkylation Unit Operator was working to de-pressure the Magtech level column on the Second Stage Acid Settler to prepare the instrument for maintenance. The column was isolated and the operator began to remove a bleeder cap so that a flex hose could be connected to the flare. As he began to loosen the cap, the cap tilted indicating the threads were not secure. Before the cap could be removed or retightened, it began to leak, indicated by puffs of "smoke". As the operator prepared to back away from the area, he turned his head to locate the ladder to exit the platform when material contacted the left side of his face and he felt a burning sensation. The operator descended the ladder to grade and immediately entered a nearby safety shower. He was assisted by another operator. An emergency call was made immediately and Monroe Emergency Response Technicians responded and began treatment with calcium gluconate gel and a nebulizer. The operator was transported to the Alkylation Unit change house where treatment continued and then to Crozer Chester Medical Center (CCMC) where he was treated for minor burns.

EMERGENCY RESPONSE PROGRAM INFORMATION
The Trainer Refinery maintains a written emergency response program, which is in place to protect worker and public safety as well as the environment. The program consists of procedures for responding to a release of a regulated substance, including the possibility of a fire or explosion if a flammable substance is accidentally released. The procedures address all aspects of emergency response, including proper first-aid and medical treatment for exposures, evacuation plans and accounting for personnel after an evacuation, notification of local emergency response agencies if a release occurs, and post incident cleanup and decontamination requirements. In addition, the Trainer Refinery has procedures that address maintenance, inspection, and testing of emergency response equipment, as well as instructions that address the use of emergency response equipment. Employees receive training in these procedures as necessary to perform their specific emergency response duties. The emergency response program is updated when necessary based on modifications made to refinery processes or other refinery facilities. The emergency response program changes are administered through the MOC process, which includes informing and/or training affected personnel in the changes.

The overall emergency response program for the Trainer Refinery is coordinated with the Delaware County, PA Local Emergency Planning Committee (LEPC). This coordination includes periodic meetings of the committee, which includes local emergency response officials, local government officials, and industry representatives. The Trainer Refinery has around-the-clock communications capability with appropriate LEPC officials and emergency response organizations (e.g., Delaware County 911 Center). This provides a means of notifying the public of an incident, if necessary, as well as facilitating quick response to an incident. In addition to periodic LEPC meetings, the Trainer Refinery conducts periodic emergency drills that involve the LEPC and emergency response organizations, and the refinery provides annual refresher training to local emergency responders regarding the hazards of regulated substances in the refinery.

PLANNED CHANGES TO IMPROVE SAFETY
The Trainer Refinery emphasizes continuous improvement to augment and strengthen its accident prevention program. Many safeguards have already been instituted and are in place to prevent an accidental release as well as to mitigate or minimize its impact should one occur. Engineering and administrative safeguards will continue to be installed as they are developed as part of

the ongoing effort to enhance the overall safe operation of the Trainer Refinery.

Examples of changes that have been implemented or are in the process of implementation under Monroe Energy include:

1) Installation of a Flare Gas Recovery System

2) Development and expansion of an Industrial Firefighting Group to enhance emergency response capability in the region

3) Purchase of additional firefighting equipment (e.g., foam tender, submersible pump, Engine)

4) Upgrades to firewater system

5) Modifications at the site to reduce magnitude of potential blast overpressure in the event of a release

6) Validation and addition of Safety Integrity Levels for safety instrumented systems

7) Additional dual mechanical seals on pumps in light hydrocarbon service

8) Lube oil mist system for improved pump reliability

9) HF Alkylation Unit modifications that will improve leak detection (response time) and reliability of the Rapid Acid Deinventory System

10) FCC Electrostatic Precipitator shutdown system

11) Updated software tools to improve effectiveness of various process safety programs (e.g. MOC, PHA, PSSR, PSI, Incident Investigation, Audits, action item tracking).

12) Implementation of console loading and operator loading studies resulting one additional console and reorganization of outside duties

13) Implementation of fatigue management policies